CITY OF MANCHESTER.

REPORT

ON THE

Health of the City of Manchester,

1929,

BY

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PUBLIC HEALTH OFFICE,
CIVIC BUILDINGS,
1, MOUNT STREET, MANCHESTER.

September, 1930.

MY LORD MAYOR, ALDERMEN,
AND MEMBERS OF THE CITY COUNCIL,

The report on the health of the City for the year 1929 has been compiled in accordance with the Memorandum of the Ministry of Health. The summary of the year's vital statistics is shown on page 1.

As compared with the year 1928 the birth rate shows an increase of 0·11 and the death rate an increase of 2·41.

The chief causes of the increased death rate were influenza, pneumonia, and bronchitis, which were prevalent almost to epidemic degree during February and March.

I have the honour to be,

Your obedient Servant,

R. VEITCH CLARK,
Medical Officer of Health.

STATISTICAL.

The following are general statistics for the year 1929:—

Area of the City in acres			21,690
Population at the Census, 1921			730,307
„ „ „ „ Adjusted by Registrar-General for Holiday Movement			744,000
Estimated population at the middle of year 1929	Males	363,915	770,655
	Females	406,740	
No. of persons per acre			36
Persons married per 1,000 of population in the area of the Manchester Union			17·04
Births in the City of Manchester	Males	6,696	13,032
	Females	6,336	
Annual birth-rate per 1,000 of population			16·91
Deaths	Males	6,117	11,819
	Females	5,702	
Recorded annual death-rate per 1,000 of population	Males	16·79	15·34
	Females	14·01	
Deaths under 1 year of age per 1,000 births			97·30
Excess of registered births over deaths			1,213
Percentage of mortality occurring in public institutions			43·21

No. of occupied undivided private houses at the Census in June, 1921	141,311
„ „ „ „ „ tenements, blocks of flats, shops, etc., at the Census in June, 1921.	155,017
No. of persons per occupied undivided private house (Census 1921)	4·35
„ „ all occupied dwellings (Census 1921)	4·71
„ „ „ „ 1929 (Based on 180,481 houses as supplied by the Waterworks Department)	4·27

No. of new houses erected during 1929:—

By Local Authority	1,980	
By other bodies or persons	1,228	
		3,208

CITY OF MANCHESTER (299, OLDHAM ROAD)—METEOROLOGY, 1929. (Means of the Monthly Readings.)

	Barometer	Dry Bulb	Wet Bulb	Humidity	Maximum Temperature	Minimum Temperature	Mean Temperature in Shade	Sun Maximum	Grass Maximum	One Foot	Four Feet	Total Rainfall (inches)	Total No. of Wet Days	Total Hours of Sunshine	Average Mean Daily Temperature 1881-1915 (extracted from the book of normals)	Average Rainfall 1892-1929	Average Hours of Sunshine 1892-1929	Fog Noted
January	30·302	36·4	35·0	87	40·0	34·2	37·1	46·8	31·8	35·1	42·2	1·96	18	7·4	39·1	3·02	10·47	8th, 17th, 21st, and 22nd.
February ..	30·072	33·6	32·4	87	39·6	30·8	35·2	48·8	29·6	35·9	41·2	1·04	14	23·3	40·1	2·44	29·65	14th, 22nd, and 23rd.
March	30·365	39·7	38·1	86	53·1	36·4	44·8	72·9	33·3	35·7	39·5	1·18	5	89·0	42·3	2·43	72·68	2nd, 3rd. 5th, 6th, 7th, 8th, 9th, 11th, 14th, 18th, 19th, 20th, 26th, 27th, 28th, 29th, 30th, 31st.
April	30·051	45·0	41·0	69	52·1	39·2	45·7	86·6	37·1	43·8	43·7	1·07	12	140·0	46·8	1·93	116·43	
May	29·961	54·8	49·2	68	62·9	46·9	54·9	96·3	44·6	51·1	48·1	2·79	15	209·1	52·6	2·33	145·02	
June	29·999	57·7	52·0	67	64·9	50·8	57·9	101·4	48·7	58·6	54·7	1·04	16	198·7	58·4	2·63	151·64	
July	30·012	62·3	57·0	72	69·7	55·6	62·6	105·6	52·2	62·8	59·0	3·58	14	148·8	60·8	2·89	141·00	
August	29·904	60·1	56·2	78	66·5	54·4	60·5	103·0	51·2	59·9	59·7	4·10	21	105·2	59·9	3·63	117·07	
September ..	30·107	58·8	55·9	83	66·8	53·8	60·3	95·2	49·0	58·8	59·1	2·15	12	113·6	56·4	2·59	98·70	16th, 17th, and 18th.
October	29·780	49·2	47·2	86	54·3	45·8	50·1	76·9	42·9	50·1	55·0	5·30	20	57·3	49·8	3·34	55·65	24th, 27th, and 31st.
November ..	29·667	44·9	43·4	92	49·2	41·3	45·3	59·8	38·8	43·3	48·7	6·88	25	20·4	43·6	2·65	18·20	1st, 15th, and 18th.
December ..	29·564	43·0	41·9	91	46·2	39·4	42·8	53·9	38·1	41·5	46·4	6·40	26	14·6	40·4	3·52	6·77	16th, 17th, and 21st.
YEAR ..	29·982	48·8	45·8	81	55·4	44·1	49·8	78·9	41·4	48·1	49·8	37·49	198	1127·4	49·2	33·40	963·28	

The extent to which Institutions are used is to some extent represented in the following table:—

TABLE I.

DEATH-RATES IN THE HOMES OF THE PEOPLE AND IN INSTITUTIONS FOR 5 YEARS 1925–1929.

YEAR	Estimated Populations to middle of Year	Death-rate per 1000 of persons dying in their own homes	Death-rate per 1000 of persons dying in Institutions	Total death-rate per 1000
1925	758,235	8·67	5·73	14·40
1926	761,320	8·01	5·16	13·17
1927	764,420	7·99	5·78	13·77
1928	767,530	7·31	5·62	12·93
1929	770,655	8·71	6·63	15·34

The chief causes of death are shown below for each of the years 1924–1929:—

TABLE 2.

	1924	1925	1926	1927	1928	1929
Tuberculosis of the Lungs ..	906	997	905	881	843	930
Tuberculosis of Organs other than the Lungs	229	184	170	172	149	152
Diseases of the Heart	1123	1133	1104	1152	1155	1540
Cerebral Hæmorrhage, Apoplexy, Hemiplegia	473	498	502	422	426	456
Pneumonia	1023	961	799	952	905	1305
Bronchitis	1234	1371	1065	1194	835	1029
Digestive Organs	339	364	348	323	351	346
Atrophy, Debility (chiefly in infants)	105	69	56	42	36	40
Old Age..	353	459	435	353	362	469
Premature Birth	299	281	254	250	250	270
Nephritis and Bright's Disease..	273	243	255	275	338	296
Convulsions	81	69	59	59	44	44
Inflammation of the Brain ..	43	39	34	34	37	46
Diarrhœa and Dysentery	212	230	237	118	203	185
Measles	370	129	156	164	123	60
Scarlet Fever	32	56	25	20	14	11
Whooping Cough	116	206	61	124	89	220
Diphtheria	62	102	103	91	99	57
Influenza	342	262	214	455	175	704
Malignant Disease	1050	1055	1099	1083	1107	1135

The following figures show the gains and losses in the death-rates in 1929 over the average of the previous ten years:—

TABLE 3.

Gains and Losses in 1929 *per* 1,000 *persons living, as compared with the average for the* 10 *years* 1919-1928.

Gains.

Measles	0·14
Scarlet Fever	0·04
Diphtheria	0·03
Diarrhœal Diseases	0·06
Puerperal Fever	0·01
Pyæmia and Septicæmia	0·01
Tubercular Meningitis	0·04
Tubercular Peritonitis: Tabes Mesenterica	0·02
Tubercular Diseases (other)	0·03
Premature Birth	0·04
Bronchitis	0·18
Digestive System	0·02
Total	0·62

Losses.

Influenza	0·43
Whooping Cough	0·14
Cancer	0·14
Erysipelas	0·01
Phthisis	0·01
Diseases of the Heart and Blood Vessels	0·85
Pneumonia	0·45
Respiratory Diseases (other)	0·09
Urinary System	0·02
Old Age	0·07
Total	2·21

Balance of Loss from above Causes	1·59
,, ,, ,, all Causes	1·73

INFANTILE MORTALITY.

TABLE 4.

Deaths per 1,000 *births at the ages* 0–2 *months,* 3–5 *months, and* 6–11 *months in successive years.*

YEARS	Months of Age			
	0–2	3–5	6–11	Under 1 year
1891–1895 (mean) ..	82·79	40·99	62·97	186·75
1896–1900 (mean) ..	83·44	42·43	66·28	192·16
1901–1905 (mean) ..	81·02	37·52	54·24	172·78
1906–1910 (mean) ..	73·89	29·12	44·27	147·28
1911–1915 (mean) ..	69·23	24·38	39·26	132·88
1916–1920 (mean) ..	58·46	17·72	28·65	104·82
1921–1925 (mean) ..	52·46	15·63	27·38	95·45
1926	49·14	14·62	22·86	86·62
1927	48·62	13·84	23·31	85·77
1928	50·97	17·51	22·39	90·87
1929	52·10	18·03	27·17	97·30

Table 5 allows a comparison with former years in respect of the infantile mortality rates from different causes for the whole of the first year of life.

TABLE 5.

CITY OF MANCHESTER.

CAUSES OF DEATH	DEATHS UNDER ONE YEAR PER 1,000 BIRTHS					
	1924	1925	1926	1927	1928	1929
All causes	100·13	95·77	86·62	85·77	90·87	97·30
Smallpox	..	..	..	..	..	..
Chickenpox	..	0·14	0·29	0·15	0·08	..
Measles	4·77	1·91	2·29	3·44	3·64	1·38
Scarlet Fever	0·07	0·07	..	0·23	..	..
Whooping Cough	2·52	5·95	2·08	3·67	3·33	5·76
Diphtheria	0·34	0·64	0·72	0·92	1·08	0·77
Erysipelas	0·20	0·50	0·21	0·31	0·08	0·15
Tuberculous Meningitis	0·82	0·57	0·79	0·38	0·39	0·77
Abdominal Tuberculosis	0·20	0·28	0·22	0·15	0·23	0·15
Other Tuberculous Diseases ..	0·82	0·50	0·50	0·38	0·39	0·15
Meningitis (*not Tuberculous*) ..	0·95	0·64	0·64	0·46	0·70	0·92
Convulsions	4·29	4·39	3·08	3·97	2·71	3·07
Laryngitis	0·14	..	..	..	..	..
Bronchitis	9·19	9·20	6·24	6·34	7·05	5·83
Pneumonia (all forms)	16·68	13·94	13·54	13·68	16·11	20·18
Diarrhœa and Enteritis	11·10	12·88	13·83	10·17	13·24	12·35
Gastritis..	1·09	0·99	0·57	0·54	0·39	0·77
Syphilis	1·50	0·71	0·57	0·61	0·54	0·54
Rickets	0·20	0·35	0·36	0·08	0·54	0·23
Injury at Birth	2·38	2·19	2·58	2·60	2·48	3·07
Atelectasis	1·36	1·27	0·93	1·60	1·70	2·15
Congenital Malformation	5·65	6·02	6·88	6·19	6·14	5·45
Premature Birth	20·35	19·89	18·20	19·11	19·36	20·72
Atrophy, Debility, and Marasmus	6·74	4·88	3·94	2·98	2·79	2·99
Overlying, found dead in bed, and suffocation..	1·43	0·57	1·15	0·46	0·62	0·46
Other causes..	7·34	7·29	7·01	7·35	5·97	9·44

Herewith are given the tables of poor law relief :—

AMOUNT OF POOR LAW RELIEF.

This is shown in the table on page 9, compiled from a monthly statement furnished to the Hospitals Sub-Committee. Further particulars are given in the statement below, obtained from the Clerk to the Manchester Guardians.

Manchester Union.

Return relating to Sick Persons and Persons suffering from Mental Infirmity Maintained by, or Chargeable to, the Guardians of the Poor of the Manchester Union on the 1st January, 1930.

Institution	Class of Case Maintained	Sick	Suffering from Mental Infirmity
1. *Poor Law Establishments.*			
(*a*) *Belonging to Manchester Union :—*			
Crumpsall Infirmary (2,500).	General Hospital and Lunacy	1,711	604
Withington Hospital (1,670).	General Hospital	1 219	—
Rose Hill Convalescent Home (122)	Convalescent Children .	106	—
Booth Hall Infirmary (750).	General Hospital for Children	572	—
Langho Colony (620)	Epileptic persons	—	620
Swinton Home (144)	Mentally deficient children	—	137
(*b*) *Belonging to other Unions :—*			
Garstang	Feeble-minded persons.	—	2
Ulverston	,, ,, .	—	12
Lunesdale	,, ,,	—	9
West Derby	Mentally deficient persons	—	2
Metropolitan Asylums Board (Whiteoak School)	Ophthalmic children	1	—
2. *Non-Poor Law Establishments.*			
(*a*) *County Mental Hospitals :—*			
Lancaster	Lunatics	—	368
Prestwich	,,	—	932
Winwick	,,	—	592
Whittingham	,,	—	142
Rainhill	,,	—	86
(*b*) *Hospitals, Homes, and Schools :—*			
St. John Baptist's Ophthalmia School, Chigwell	Ophthalmic Boys	2	—
Pen-y-Coed, Abergele	Phthisical children	10	—
St. Vincent's Hospital for the Dying, Liverpool	Incurables	1	—
Banksea Convalescent Home, Dovercourt	Convalescent children .	4	—
Soss Moss Schools, Chelford.	Epileptics	—	1
	Carried forward	3,626	3,507

Institution	Class of Case Maintained	Sick	Suffering from Mental Infirmity
	Brought forward ..	3,626	3,507
Non Poor Law Establishments (continued)—			
(*b*) *Hospitals, Homes, and Schools*—(continued)			
St. Fechan's Sanatorium, Ecclefechan	Phthisical boys	15	—
Monsall Fever Hospital, Newton Heath	Infectious persons ..	11	—
Dr. Garrett Memorial Home, Conway	Phthisical children ..	166	—
Royal Alexandra Hospital, Rhyl	Convalescent	4	—
Sandlebridge School, Alderley Edge	Mentally defective adults	—	8
All Souls' Special School, Hillingdon, Essex	Feeble-minded girls	—	3
Cumnor Rise Home, Botley, Oxford		—	3
Stoke Park Colony, Bristol.	Feeble-minded persons	—	28
Whittington Hall, Chesterfield		—	8
Pontville Home, Ormskirk..	Feeble-minded boys ..	—	3
Durran Hill House, Carlisle.	Mentally defective women	—	7
St. Joseph's Home, Sudbury	Feeble-minded young women	—	2
Allerton Priory, Woolton, Lancs.	Feeble-minded children	—	1
Royal Albert Institution, Lancaster	Feeble-minded adults..	—	9
David Lewis Epileptic Colony, Alderley Edge	Epileptics	—	1
St. Elizabeth's Home for Epileptics, Much Hadam, Herts.	,, ...	—	1
Home for Aged Needy and Incurable Jews	Incurable Jews	4	—
Eastby Sanatorium, Skipton, Yorkshire	Phthisical boys	12	—
Home for Incurables, Liverpool	Incurables	1	—
St. Francis Roman Catholic Special School, Hillside House, Buntingford	Feeble-minded children	—	1
Seabright House, South Drive, St. Annes-on-Sea	Convalescent children..	8	—
Brabazon House, Reigate, Surrey	,, ,, ..	3	—
	Total	3,850	3,582
Central Hall } Maternity Homes	Maternity cases	3	—
Macalpine	,, ,, ...	3	—

N.B.—The figures shown in brackets against the Institutions under heading 1 (*a*) represent the accommodation for the class referred to.

The Number of Persons who were in Receipt of Relief from the Manchester Board of Guardians during the Last Week in each Month of the Years 1929 and 1928.

	1929			1928		
	Indoor	Out-Door	Sick Patients remaining in Guardians Hospitals	Indoor	Out-Door	Sick Patients remaining in Guardians' Hospitals
January ..	8,097	22,436	2,986	8,050	27,216	2,947
February ..	8,349	22,863	3,184	8,102	25,083	2,920
March ..	8,107	22,134	3,095	7,978	23,868	2,883
April	7,793	19,994	3,005	7,764	23,868	2,770
May	7,637	19,005	2,889	7,603	21,931	2,745
June	7,523	19,290	2,828	7,519	22,482	2,705
July	7,350	18,929	2,785	7,476	20,824	2,737
August ..	7,330	20,357	2,614	7,436	21,464	2,560
September..	7,290	19,197	2,743	7,431	20,877	2,584
October ..	7,493	19,658	2,770	7,623	21,492	2,743
November .	7,652	19,978	2,772	7,841	21,454	2,863
December ..	7,802	20,882	2,780	8,005	21,571	2,853

TABLES.

1929.

TABLE A.–MANCHESTER, 1929.

Causes of Death at Different Life Periods in the 52 weeks of the

PERSONS.–(MALES AND FEMALES.)

CAUSES OF DEATH	All Ages	Under 5 Years		Ages at Death								
		0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75
All Causes	11819	1268	699	158	88	202	293	560	839	1589	1992	2375
A.—General Diseases	4434	751	328	70	37	120	185	288	390	639	731	617
B.—Local Diseases	6482	462	345	65	40	70	75	234	406	889	1188	1560
C.—Other Specified Dis.	...	...	...	...	...	...	...	...	..	...	...	...
D.—Ill-defined Diseases	529	43	2	...	...	...	3	...	3	6	19	153
E.—Violent Deaths	374	12	24	23	11	12	30	38	40	55	54	45
A.—General Diseases.												
Smallpox.. Vaccinated	1	...	...	...	...	...	...	1	...	...	...	...
Smallpox.. Not Vaccinated	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox.. No Statement	...	...	...	...	...	...	...	...	...	...	...	...
Cowpox	...	...	...	...	...	...	...	...	...	...	...	...
Chickenpox	2	...	2	...	...	...	...	...	...	...	...	...
Measles	60	18	40	2	...	...	...	...	...	...	...	...
Rubella	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	11	...	7	3	1	...	...	...	...	...	...	...
Typhus	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	..	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...
Influenza	704	12	22	6	6	10	19	35	78	136	127	154
Whooping Cough	220	75	135	10	...	...	...	...	...	...	...	...
Mumps	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria	57	10	28	14	1	1	1	...	1	...	...	1
Poliomyelitis	1	...	...	1	...	...	...	...	...	...	...	...
Cerebro-spinal Fever	9	...	8	...	...	...	1	...	...	...	...	...
Simple Cont: Fever	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	6	...	1	...	...	...	3	1	1	...	...	...
Asiatic Cholera	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic Diarrhœa	16	11	4	1	...	...	...	...	...	...	...	...
Diarrhœa	166	150	15	1	...	...	...	...	...	...	...	...
Dysentery	3	...	...	...	...	...	...	...	1	1	...	1
Malarial Fever	2	...	...	...	...	...	...	1	...	...	...	1
Trench Fever	...	...	...	...	...	...	...	...	...	...	...	...
Actinomycosis	...	...	...	...	...	...	...	...	...	...	...	...
Hydrophobia	...	...	...	...	...	...	...	...	...	...	...	...
Glanders	...	...	...	...	...	...	...	...	...	...	...	...
Anthrax	...	...	...	...	...	...	...	...	...	...	...	...
Tetanus	1	...	...	1	...	...	...	...	...	...	...	...
Syphilis	35	6	...	1	...	...	1	2	6	10	6	3
Gonorrhœa, Strict: Urethra	16	1	...	...	...	1	...	...	...	4	5	5
Puerperal.. Septicæmia	6	...	...	...	...	1	2	1	2	...	...	...
Puerperal.. Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. Phlegmasia Dol.	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal.. *Fever*	13	...	...	...	...	...	3	6	4	...	...	...
Infective Endocarditis	17	...	...	...	...	1	3	4	1	6	2	...
Epidemic Pneumonia Pneumonic Fever	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	28	2	3	...	1	...	...	...	1	7	6	6
Septicæmia (not puerp:)	13	...	1	1	...	1	...	2	2	2	3	1
Pyæmia (not puerp:)	5	1	...	1	...	...	...	...	...	1	2	...
Phlegmon	15	3	...	1	...	...	1	3	...	2	3	1
Phagedæna	...	...	...	...	...	...	...	...	...	...	...	...
Other Septic Diseases	...	...	...	...	...	...	...	...	...	...	...	...
Tubercular Phthisis	858	1	7	2	7	73	108	169	173	176	109	31
Phthisis	72	...	...	1	...	3	9	10	17	15	12	5
Tubercular Meningitis	66	10	22	11	5	7	3	6	...	1	...	1

TABLE A, 1929—*continued.*

AUSES OF DEATH	AGES AT DEATH													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
General Diseases— *continued*														
cular Peritonitis	23	1	3	1	1	5	4	3	3	...	1	1	...	...
Mesenterica......	2	1	...	1	..	...	...	...	...	...	...	...	...	...
....	1	...	...	...	...	...	...	...	...	...	1	...	...	...
cle of other organs	30	...	1	1	2	4	5	4	3	...	6	1	3	...
al Tuberculosis	30	1	5	3	2	2	5	3	4	2	3	...	...	...
la	...	...	...	...	...	...	...	...	...	...	...	...	...	...
tic Diseases..................	...	...	...	...	...	...	...	...	...	...	...	...	...	...
tion	...	...	...	...	...	...	...	...	...	...	...	...	...	...
y	...	...	...	...	...	...	...	...	...	...	...	..	...	...
olism, Delirium Tremens	11	...	...	...	...	...	1	1	...	5	2	...	2	...
n, Morphia Habit	...	...	...	...	...	...	...	...	...	..	...	...	...	...
Poisoning.................. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
trial ming Lead..................	1	...	...	...	...	...	...	...	...	...	1	...	..	...
Phosphorus	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arsenic, &c.	...	...	...	...	...	...	...	...	...	...	...	...	.	...
n: Fever, Acute Rheum:..	52	...	1	2	3	6	5	3	9	10	9	3	1	...
natism of Heart	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ic Rheumatism	63	...	2	1	3	1	1	1	3	7	18	19	7	...
n: Arthritis, Rheum: Gout	26	...	...	...	...	...	...	...	2	3	8	3	10	...
....	2	...	...	...	...	...	...	...	...	...	...	1	1	..
r—Buccal Cavity	65	...	...	...	...	...	...	...	...	7	27	24	7	..
Stomach and Liver ...	3'3	...	...	...	...	...	...	5	13	71	123	117	31	3
eritoneum, Intest., Rectum	194	...	...	...	...	...	1	1	9	33	52	71	24	3
emale Genital Organs ...	142	...	...	...	...	...	2	3	12	37	38	34	15	1
reast.........................	100	...	...	...	...	...	...	1	11	33	29	17	8	1
kin	19	...	...	...	...	...	...	...	1	...	6	7	5	...
thers or unspecified........	252	1	...	..	1	...	1	8	16	48	85	6	27	4
ts	10	3	7	...	...	...	...	...	...	...	...	...	...	..
ra	14	4	3	1	...	...	...	3	...	2	1	..	...	..
ophilia, Hæm: Diathesis	1	...	...	...	...	...	1	...	...	...	...	...	...	..
nia, Leucocythæmia	92	2	4	3	4	2	3	5	11	12	16	22	8	..
tes Mellitus..................	91	...	...	...	...	2	1	6	6	8	29	26	11	2
Constitutional Diseases .	1	...	1	...	...	...	...	...	...	...	...	...	...	..
ature Birth	270	270	...	...	...	...	...	...	...	...	...	...	..	...
enital Defects	77	71	4	...	...	...	1	...	...	...	1	...	..	..
y at Birth	40	40	...	...	...	...	...	...	...	...	...	..	...	..
ctasis..........................	28	28	...	...	...	...	...	...	...	...	...	...	...	.
of Breast Milk	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ning	4	2	2	...	...	...	...	...	...	...	...	...	...	...
rs of Early Infancy.........	27	27	...	...	...	...	...	...	...	...	...	...	...	..
Local Diseases.														
ERVOUS SYSTEM.														
mmation of Brain...........	46	12	16	5	2	3	1	3	..	3	1	...	...	...
ning of Brain	2	...	...	...	...	...	...	...	...	...	...	1	1	...
ral Paraly: of Insane......	24	...	...	...	...	...	...	3	5	11	5	...	...	...
ity (not puerperal)........	68	...	2	...	...	...	2	3	5	22	26	8	...	...
ea	4	...	...	...	1	2	...	1	...	...	...	...	..	..
psy.............................	39	...	...	2	1	5	3	6	5	7	3	2	4	1
ulsions	44	40	4	...	...	...	...	...	...	...	...	..	...	...
ngismus Stridulus......	3	...	1	2	...	...	...	...	...	...	...	...	...	..
motor Ataxy.................	17	...	...	...	...	...	...	...	...	6	6	3	2	...
of Spinal Cord......	47	...	...	...	...	...	1	4	2	10	7	19	4	...
itis	7	2	...	...	...	...	...	...	...	1	2	2	...	...
n Tumour	25	...	...	2	1	..	1	3	8	6	3	1	...	
Encephalitis.........	2	...	1	1	...	...	...	...	...	...	...	...	...	...
phalitis Lethargica	24	...	1	...	2	2	1	3	6	2	5	2	...	...
ous System (Other Dis:)..	32	3	3	1	1	1	1	...	4	4	5	6	3	...
ISEASES OF SPECIAL SENSE ORGANS.														
s, Mastoid Disease	32	5	6	2	2	4	2	3	4	2	1	...	...	
taxis, Nose Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	..
thalmia, Eye Disease	...	...	...	...	...	...	...	...	...	...	...	...	..	..

TABLE A, 1929—*continued.*

CAUSES OF DEATH	All Ages	Under 5 Years		Ages at Death								
		0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75
3. DISEASES OF HEART.												
Valvular Dis : Endocarditis	525	...	...	3	5	8	9	35	51	84	134	130
Pericarditis	15	...	1	1	1	...	...	1	...	4	6	1
Hypertrophy of Heart...........	1	...	...	...	...	...	...	...	...	...	...	1
Angina Pectoris	55	...	...	...	...	...	...	...	3	15	14	20
Dilatation of Heart	60	1	...	1	1	...	2	1	8	9	11	16
Fatty Degen : of Heart	42	...	...	...	...	...	...	2	2	9	20	8
Syncope, Heart Disease.........	842	3	1	...	...	3	1	8	28	100	178	293
4. DIS : OF BLOOD VESSELS.												
Cerebral Hæmorrhage............	395	1	...	...	...	...	...	3	11	45	87	153
Apoplexy, Hemiplegia............	61	...	...	...	...	...	...	1	...	4	18	15
Aneurism	17	...	...	...	...	1	...	1	...	6	4	4
Senile Gangrene	15	...	...	...	...	...	...	...	...	...	1	6
Embolism, Thrombosis	88	1	...	3	...	...	...	...	7	12	18	26
Phlebitis............................	1	...	...	...	...	...	..	...	...	...	1	..
Varicose Veins	2	...	...	...	...	...	...	...	...	...	2	...
Blood Vessels (Other Diseases)	548	...	...	...	...	...	...	...	6	30	84	192
5. DIS : OF RESPIRATORY SYS :												
Laryngitis	5	...	1	1	...	...	...	...	1	1	1	...
Memb: Laryng: (Not Diphth:)	...	...	...	...	...	...	...	...	...	...	...	...
Croup..................	...	...	...	...	...	...	...	...	...	...	...	...
Larynx (Other Dis:)	2	...	2	...	...	...	...	...	...	...	...	...
Bronchitis	1029	76	32	2	1	1	5	7	32	128	185	283
Pneumonia { Lobar-Croupous.	496	12	36	12	3	17	18	47	85	101	76	65
Pneumonia { Broncho-Lobular.	791	249	212	8	1	3	5	10	31	73	56	99
"*Pneumonia*".....................	18	2	1	1	1	...	...	3	2	2	4	2
Emphysema, Asthma	64	...	...	2	1	...	...	1	6	22	14	12
Pleurisy	41	...3	5	...	...	1	1	3	5	7	10	5
Fibroid Disease of Lung........	6	...	...	...	...	...	...	1	1	...	...	4
Respiratory Dis: (Other)	48	3	1	...	...	1	...	4	3	6	12	6
6. DIS: OF DIGESTIVE SYS:												
Tonsillitis, Quinsy	11	1	...	5	...	...	...	1	1	1	1	1
Mouth, Pharynx	11	...	...	...	...	...	...	...	...	...	...	8
Gastric Ulcer.......................	57	...	...	...	...	1	2	7	9	28	10	...
Gastric Catarrh....................	...	...	...	...	...	...	...	...	...	...	...	...
Stomach (Other Dis:)...........	34	10	...	...	...	1	1	1	2	3	2	8
Enteritis............................	3	...	...	...	...	...	...	1	...	...	...	1
Gastro-Enteritis....................	1	...	...	...	...	...	...	1	...	...	...	...
Appendicitis, Perityph :	63	...	5	2	7	8	3	5	8	10	9	5
Hernia	50	2	...	...	...	...	...	1	3	5	14	14
Intestinal Obstruct:..............	38	8	2	1	...	1	1	4	2	4	4	8
Other Diseases of Intestines ..	8	1	...	...	...	...	...	1	1	...	4	1
Peritonitis	13	1	4	2	1	...	...	...	3	1	1	...
Cirrhosis of Liver.................	33	1	...	...	...	...	1	...	1	8	10	11
Liver	25	1	...	1	1	...	...	2	2	4	9	2
Biliary Calculi	15	...	...	...	...	...	...	...	...	3	5	7
Digestive System (Other Dis:)...	14	4	1	...	...	1	...	1	2	2	1	2
7. DIS : OF LYMPHATIC AND DUCTLESS GLANDS.												
Spleen, Disease of................	1	...	...	...	...	...	...	...	...	1	...	...
Lymphat: Syst: (Other Dis:)...	35	3	3	2	1	...	2	2	4	9	9	...
Thyroid Body (Other Dis:) ...	7	...	...	...	...	1	...	...	...	5	...	1
Addison's Dis : (Dis: of)	4	...	...	...	...	...	1	...	1	1	...	1
8. DISEASES OF URINARY SYSTEM.												
Nephritis Ac: Uræmia	39	2	1	2	...	2	1	5	1	5	8	8
Ch : Bright's Dis : Albumin : ...	257	...	...	...	2	...	7	13	23	57	66	60
Calculus	5	...	...	...	...	...	...	1	...	2	2	...
Bladder and Prostate Dis : ...	62	...	...	...	...	...	...	...	1	2	18	26
Urinary Syst : (Other Dis :) ...	11	...	...	...	...	...	...	...	3	1	3	2

TABLE A, 1929—*concluded.*

CAUSES OF DEATH	Ages at Death													
	All Ages	Under 5 Years		5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
		0 to 1	1 to 5											
ISEASES OF GENERATIVE SYSTEM.														
an Tumour	9	...	...	...	...	...	...	1	...	2	3	3	...	...
Dis: of Ovary	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ne Tumour	1	...	...	...	...	...	...	...	...	1	...	...	...	...
Dis: of Uterus and Vagina	2	...	...	...	...	...	1	...	...	1	...	...	...	...
d: of Menstruation	...	...	...	...	...	...	...	...	...	...	...	...	...	...
r: and Mam: Orgs: (Other)	1	...	...	...	...	...	...	1	...	...	...	...	...	...
ISEASES OF PREGNANCY AND CHILDBIRTH.*														
ion, Miscarriage	6	...	...	...	...	1	...	2	3	...	...	...	...	...
eral Mania	3	...	...	...	...	...	1	1	1	...	...	...	...	...
eral Convulsions	6	...	...	...	...	...	...	3	3	...	...	...	...	...
nta Præv: Flooding	7	...	...	...	...	...	...	4	3	...	...	...	...	...
Ac: of Preg: & Childbirth	16	...	...	...	...	1	...	9	6	...	...	...	...	...
ISEASES OF LOCOMOTOR SYSTEM.														
s, Necrosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...
itis, Periostitis	12	...	1	...	1	...	1	2	...	...	2	2	3	...
notor Sys: (Other)	11	2	2	1	3	...	...	...	1	...	1	1	...	...
ISEASES OF THE SKIN.														
, Bedsore	2	...	...	...	...	...	...	...	...	...	1	1	...	...
na	6	5	...	...	...	...	...	...	...	...	1	...	...	...
higus	3	3	...	...	...	...	...	...	...	...	...	...	...	...
Diseases (Other)	14	5	...	...	...	1	...	2	1	1	1	2	1	...
ther Specified Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ill-defined and not Speci-d Diseases.														
hy, Debility	40	39	1	...	...	...	...	...	...	...	...	...	...	...
lge	469	...	...	...	...	...	...	...	...	1	16	152	244	56
sy, Ascites, Anasarca	...	...	...	...	...	...	...	...	...	...	...	...	...	...
our	13	...	1	...	...	...	1	...	3	4	3	1	...	...
ss	5	3	...	...	...	...	1	...	...	1	...	...	...	...
orrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	...
en (cause unascertained)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ill-defined	2	1	...	...	...	...	1	...	...	...	...	...	...	...
.—Violent Deaths.														
CCIDENT.														
ines and Quarries	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ehicles { On Railways	10	...	...	...	...	...	1	2	1	2	2	2	...	...
ehicles { In Streets	130	...	9	17	4	8	22	15	15	9	14	11	6	...
, Boats, Docks (not rowning)	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ing Operations	5	...	...	...	...	...	...	2	...	3	...	...	...	...
inery	2	...	...	...	...	...	...	...	...	1	...	1	...	...
ons and Implements	...	...	...	...	...	...	...	...	...	...	...	...	...	...
s and Scalds	38	3	13	1	2	1	...	3	3	...	3	3	6	...
n, Poisonous Vapours	11	...	...	...	...	2	...	...	1	4	...	3	...	1
ning	23	...	1	1	1	1	1	4	3	3	4	2	2	...
cation	8	6	...	1	1	...	...	...	...	...	...	...	...	...
	48	2	...	3	1	...	1	2	1	7	8	10	11	2
her Agencies	...	...	...	...	...	...	...	...	...	...	...	...	...	...
wise or not Stated	17	...	...	...	2	...	2	4	1	4	...	2	1	1
OMICIDE.	5	1	1	...	...	...	...	1	...	1	...	1	...	...
UICIDE.	77	...	...	...	...	...	3	5	15	21	23	10	...	...
XECUTION.	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE B.—MANCHESTER, 1929.

Causes of Deaths at Different Life Periods—MALES.

Classes	CAUSES OF DEATH	All Ages Total	Under 5 Years: 0 to 1	Under 5 Years: 1 to 5	Ages at Death—in years: 5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85
	All Causes	6117	706	351	94	35	89	133	303	486	963	1089	1215	59
	Smallpox	1	...	...	...	...	...	...	1	...	...	...	...	..
	Measles	27	7	20	...	...	...	...	...	...	...	...	...	..
	Scarlet Fever	3	...	2	1	...	...	...	...	...	...	...	...	..
	Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	..
	Whooping Cough	99	36	59	4	...	...	...	...	...	...	...	...	..
	Diphtheria	30	7	14	8	...	...	...	...	1	...	...	...	..
	Ill-defined Fever	...	...	...	...	...	...	...	...	...	...	...	...	..
	Enteric Fever	4	...	...	...	...	...	2	1	1	...	...	...	..
	Influenza	323	7	12	3	4	4	7	26	40	78	51	64	2
	Epidemic Diarrhœa	12	8	3	1	...	...	...	...	...	...	...	...	..
	Diarrhœa, Dysentery, Simple Cholera	101	90	9	...	...	...	...	...	...	1	...	1	..
	Venereal Affections	36	4	...	...	...	1	...	...	3	10	10	8	..
	Erysipelas	16	2	1	...	1	...	...	...	1	5	2	3	
	Pyæmia, Septicæmia (Others)	13	1	...	1	...	1	...	1	1	2	5	1	..
A	Other Zymotics	23	...	6	2	...	...	2	3	1	7	1	1	..
	Tuberc. Periton: Tabes Mes:	10	...	1	1	...	2	...	2	3	...	...	1	..
	Tubercular Meningitis	37	5	16	5	...	5	2	3	...	...	...	1	..
	Phthisis	559	...	5	1	...	29	43	87	129	139	97	27	
	Tuberculous Dis. (Other)	38	...	5	3	3	3	7	4	3	2	5	1	
	Parasitic Diseases	...	...	...	...	...	...	...	...	...	...	...	...	..
	Alcoholism	6	...	...	...	...	...	1	1	...	2	2	...	..
	Rheumatic Fever	23	...	...	2	.	...	2	2	3	7	6	...	
	Cancer	565	...	...	...	...	...	2	8	21	122	198	164	4
	Premature Birth	148	148	...	...	...	...	..	...	...	...	...	...	..
	Congenital Defects	38	36	1	...	...	...	1	...	...	...	...	...	..
	Atelectasis	14	14	...	...	...	..	...	..	...	...	...	...	..
	Epilepsy	20	..	...	2	1	3	1	2	2	4	2	2	
	Convulsions	31	31	...	...	.	...	...	..	...	...	...	...	..
	Nervous Syst: (Other)	183	9	13	7	3	5	4	12	21	45	32	28	
	Cereb: Hæm: Apoplexy, Hemip:	203	1	...	..	..	...	...	1	2	20	39	91	4
	Heart and Blood Vessel Dis:	1050	2	...	6	2	6	3	24	46	147	238	301	20
	Pleurisy	28	1	3	...	...	...	...	1	5	6	7	5	..
B and C	Bronchitis	524	43	13	...	...	1	4	6	28	87	102	143	8
	Pneumonia: Lobar-Croupous	323	7	22	9	1	7	7	31	63	70	60	31	1
	Pneumonia: Broncho-Lobular	412	127	109	4	1	1	3	11	14	48	31	46	1
	"*Pneumonia*"	11	2	...	1	...	...	...	2	1	1	3	1	..
	Respiratory Dis: (Other)	70	3	3	2	...	...	...	2	7	24	14	12	
	Cirrhosis	17	1	...	...	...	...	...	...	..	5	6	4	
	Digestive Syst: (Other)	186	21	8	6	4	8	5	17	22	31	29	27	
	Urinary Syst: (Other)	232	1	1	1	1	1	4	8	16	36	66	65	3
	Generative Organs	...	...	...	...	...	...	...	...	...	...	...	...	..
	Other specified Diseases	243	62	12	6	7	5	11	13	19	22	41	36	
	Marasmus and Atrophy	23	23	...	...	...	...	..	...	...	...	..	...	..
D	Old Age	180	...	...	...	...	...	...	...	...	1	6	66	8
	Other Ill-defined Causes	2	1	...	...	...	...	1	...	...	...	...	...	..
	Violence	194	6	13	18	7	7	20	28	20	25	20	18	1
E	Homicide	3	...	...	...	...	...	...	1	...	1	...	1	.
	Suicide	56	...	...	...	..	...	1	5	13	15	16	6	..
	Execution	...	...	...	...	...	...	...	...	...	...	...	...	..

TABLE C.—MANCHESTER, 1929.

CAUSES OF DEATHS AT DIFFERENT LIFE PERIODS—FEMALES.

CAUSES OF DEATH	All Ages Total	Under 5 Years: 0 to 1	Under 5 Years: 1 to 5	Ages at Death—in years: 5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 and upwards
All Causes	5702	562	348	64	53	113	160	257	353	626	903	1160	911	192
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	33	11	20	2	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	8	...	5	2	1	...	...	...	...	...	...	...	...	...
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	121	39	76	6	...	...	...	...	...	...	...	...	...	...
Diphtheria	27	3	14	6	1	1	1	...	...	...	...	1	...	..
Ill-defined Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	2	...	1	...	...	...	1	..	...	...	...	...	...	...
Influenza	381	5	10	3	2	6	12	9	38	58	76	90	57	15
Epidemic Diarrhœa	4	3	1	...	...	...	..	...	...	...	...	...	...	..
Diarrhœa, Dysentery, Simple Cholera	68	60	6	1	...	...	...	...	1	...	...	...	...	...
Venereal Affections	15	3	...	1	...	...	1	2	3	4	1	...	...	...
Erysipelas	12	...	2	...	...	...	...	...	..	2	4	3	1	...
Pyæmia, Septicæmia (Others)	5	...	1	1	...	...	...	1	1	1	...	...	...	...
Puerperal Fever	19	...	...	...	...	1	5	7	6	...	...	...	...	...
Other Zymotics	19	...	4	1	...	1	3	5	...	1	4	...	...	...
Tubercular Periton: Tabes Mes.	15	2	2	1	1	3	4	1	...	...	1	...	...	...
Tubercular Meningitis	29	5	6	6	5	2	1	3	...	1	...	...	...	...
Phthisis	371	1	2	2	7	47	74	92	61	52	24	9	...	...
Tuberculous Diseases (Other)	23	1	1	1	1	3	3	3	4	...	5	...	1	...
Parasitic Diseases	...	...	...	...	...	...	..	...	...	...	...	...	...	...
Alcoholism	5	...	...	...	...	...	...	...	...	3	...	...	2	...
Rheumatic Fever	29	...	1	...	3	6	3	1	6	3	3	3	...	...
Cancer	570	1	...	...	1	...	2	10	41	107	162	167	72	7
Premature Birth	122	122	...	...	...	...	...	...	...	...	...	...	...	...
Congenital defects	39	35	3	...	...	...	...	...	...	...	1	...	...	...
Atelectasis	14	14	...	...	...	...	..	...	...	...	...	...	...	...
Epilepsy	19	...	...	...	...	2	2	4	3	3	1	...	3	1
Convulsions	13	9	4	...	...	...	...	...	...	...	...	...	...	...
Nervous System (Other)	118	8	11	4	4	3	3	8	9	20	28	14	6	...
Cerebral Hæmorrhage, Apoplexy and Hemiplegia	253	...	...	...	...	...	...	3	9	29	66	77	60	9
Heart and Blood Vessel Diseases	1161	3	2	2	5	6	9	24	59	122	235	336	291	67
Pleurisy	13	2	2	...	...	1	1	2	...	1	3	...	...	1
Bronchitis	505	33	19	2	1	...	1	1	4	41	86	140	141	36
Pneumonia { Lobar-Croupous	173	5	14	3	2	10	11	16	22	31	16	34	8	1
Broncho-Lobular	379	122	103	4	...	2	2	5	17	25	25	53	17	4
"*Pneumonia*"	7	...	1	...	1	...	...	1	1	1	1	1	..	...
Respiratory Diseases (Other)	55	...	1	1	1	1	...	4	4	5	13	10	12	3
Cirrhosis	16	...	...	...	...	...	1	...	1	3	4	7	...	...
Digestive System (Other)	160	7	4	5	5	4	2	8	11	30	31	30	20	3
Urinary System (Other)	142	1	...	1	1	1	4	11	12	31	31	31	16	2
Generative Organs and Childbirth	48	...	...	...	...	2	2	21	16	4	3	...	...	...
Other specified Diseases	282	45	20	4	7	6	3	11	17	34	51	48	34	2
Marasmus and Atrophy	17	16	1	...	...	...	...	...	...	...	...	...	...	...
Old Age	289	...	...	...	...	...	...	...	...	...	10	86	156	37
Other Ill-defined Causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violence	98	5	10	5	4	5	7	4	5	8	11	16	14	4
Homicide	2	1	1	...	...	...	...	...	...	...	...	...	...	...
Suicide	21	...	..	...	...	...	2	...	2	6	7	4	...	...

TABLE D.

MANCHESTER, 1929.—CAUSES OF DEATH IN INFANCY AND CHILDHOOD.

CAUSES OF DEATH	UNDER ONE YEAR			Total under One Year	ONE AND UNDER FIVE YEARS			
	Under 3 months	3–6 months	6–12 months		1–	2–	3–	4–
All Causes	**679**	**235**	**354**	**1,268**	**404**	**133**	**92**	**70**
Chicken Pox..................	...	...	...	...	2	...	...	...
Measles........................	...	1	17	18	28	4	6	2
Scarlatina	...	...	...	...	2	2	2	1
Whooping Cough	11	19	45	75	77	27	18	13
Diphtheria......................	3	1	6	10	7	9	6	6
Erysipelas	1	1	...	2	2	...	1	...
Diarrhœal Diseases	59	62	40	161	18	1	...	...
Gastritis........................	8	...	2	10	...	...	...	...
Syphilis	4	...	3	7	....	...	...	...
Tabes Mesenterica and Tuberc. Peritonitis	1	...	1	2	1	2	...	...
Tubercular Meningitis	...	2	8	10	10	4	1	7
Tuberculosis (Other)	...	1	1	2	6	3	3	1
Rickets	1	...	2	3	5	2	...	...
Premature Birth	261	9	...	270	...	...	...	...
Injury at Birth	39	1	...	40	...	...	...	...
Atelectasis......................	28	...	...	28	...	...	..	...
Congenital Malformations	61	7	3	71	3	1	...	...
Convulsions	29	7	4	40	3	1	...	...
Meningitis......................	3	5	4	12	9	2	2	3
Nervous Diseases (Other)...	1	2	2	5	1	3	3	1
Bronchitis	24	20	32	76	27	2	2	1
Pneumonia	52	62	149	263	164	48	25	12
Other Respiratory Diseases	4	1	1	6	5	1	2	2
Atrophy, Marasmus	32	7	...	39	1	...	...	...
Found Dead in Bed (overlaid)	3	...	...	3	...	...	...	...
Suffocation	1	2	...	3	...	...	...	...
Violence (Other forms)......	1	2	3	6	9	2	7	6
Ill-defined Causes............	1	...	...	1	...	..	...	...
Unclassified	51	23	31	105	24	20	14	15

	Year	Estimated Population (Mean)	Persons Married	Annual Rates per 1,000 persons living												Percentage to Total Deaths		Infantile Mortality	Year
				Births	Deaths (all causes)	Smallpox	Measles	Scarlet Fever	Diphtheria	Whooping Cough	Typhus Fever	Enteric Fever	Simple Continued Fever	Diarrhœal Diseases	Violence	Inquest Cases	Deaths in Public Institutions		
Quinquennial Average	1871–1875	477,344	24·6	38·9	28·3	0·26	0·64	1·08	0·08	0·78	0·14	0·43	0·21	1·95	0·94	7·2	13·4	198	.. 1871–1875
	1876–1880	509,802	18·6	38·7	26·2	0·24	0·53	1·07	0·13	0·84	0·08	0·29	0·11	1·26	0·89	7·5	14·3	172	.. 1876–1880
	1881–1885	542,746	17·9	35·1	23·6	0·04	0·71	0·48	0·10	0·68	0·05	0·20	0·03	0·99	0·72	7·0	15·9	175	.. 1881–1885
	1886–1890	575,630	16·6	33·4	24·6	0·02	0·83	0·50	0·32	0·54	0·02	0·30	0·01	1·08	0·78	6·9	17·7	183	.. 1886–1890
	1891–1895	517,801	16·9	33·2	23·6	0·03	0·62	0·26	0·27	0·64	0·00	0·24	0·01	1·19	0·77	7·1	19·2	186	.. 1891–1895
	1896–1900	539,599	18·2	32·5	22·7	..	0·89	0·20	0·13	0·53	0·00	0·18	0·01	1·69	0·73	7·1	20·2	192	.. 1896–1900
	1901–1905	554,355	17·4	30·9	20·1	0·01	0·55	0·19	0·22	0·41	0·00	0·13	0·00	1·15	0·72	7·1	24·4	173	.. 1901–1905
	1906–1910	660,049	17·0	28·1	17·7	..	0·54	0·16	0·17	0·37	0·00	0·10	0·00	0·76	0·68	7·4	27·3	147	.. 1906–1910
	1911–1915	731,677	17·6	24·8	16·4	..	0·50	0·12	0·14	0·25	..	0·05	..	0·84	0·67	7·9	30·8	133	.. 1911–1915
	1916–1920	770,330	16·7	19·2	14·1	..	0·24	0·04	0·08	0·21	..	0·02	0·00	0·30	0·49	6·4	32·3	105	.. 1916–1920
	1921–1925	751,288	15·8	20·6	13·9	..	0·25	0·06	0·10	0·20	..	0·01	..	0·33	0·44	5·7	37·8	95	.. 1921–1925
1926..		761,320	15·3	18·3	13·2	..	0·20	0·03	0·14	0·08	..	0·01	..	0·31	0·41	5·8	39·2	87	 1926
1927..		764,420	16·7	17·1	13·8	..	0·21	0·03	0·12	0·16	..	0·00	..	0·20	0·43	5·0	42·0	86	 1927
1928..		767,530	16·2	16·8	12·9	..	0·16	0·02	0·13	0·12	..	0·01	..	0·26	0·45	4·7	43·5	91	 1928
1929..		770,655	17·0	16·9	15·3	0·00	0·08	0·01	0·07	0·29	..	0·01	..	0·24	0·49	3·3	43·2	97	 1929

The populations and rates prior to 1891 are those for the Unions of Manchester, Chorlton, and Prestwich, which have been taken to approximately represent "Manchester." The City was extended to include Moss Side and Withington in November, 1904, and to include Gorton and Levenshulme in November, 1909.

TABLE F.

MANCHESTER—ANNUAL RATES OF MORTALITY FROM CERTAIN CAUSES OF DEA

YEAR	ANNUAL RATES PER 1,000 PERSONS LIVING										PE
	Cancer	Tuberc. Peritonitis Tabes Mes.	Phthisis	Other Tuberc. Diseases	Diseases of Nervous System	Diseases of Heart and Blood Vessels	Diseases of Respiratory System	Diseases of Digestive System	Diseases of Urinary System	Diseases of Generative System	Puerperal
1881-1885 ..	0·50	0·35	2·42	0·57	3·28	1·37	5·41	1·23	0·48	0·08	3·0
1886-1890 ..	0·64	0·36	2·24	0·59	3·09	1·73	5·76	1·23	0·61	0·08	3·2
1891-1895 ..	0·62	0·22	2·09	0·75	1·74	2·53	5·56	1·07	0·52	0·07	2·7
1896-1900 ..	0·73	0·19	2·04	0·63	1·32	2·54	5·03	1·04	0·49	0·09	1·5
1901-1905 ..	0·80	0·16	1·94	0·55	1·17	2·56	4·29	0·95	0·49	0·08	1·2
1906-1910 ..	0·88	0·14	1·65	0·45	0·95	2·56	3·75	0·84	0·54	0·07	1·2
1911-1915 ..	1·01	0·12	1·59	0·38	0·79	2·34	3·45	0·68	0·56	0·09	1·2
1916-1920 ..	1·08	0·09	1·39	0·28	0·54	2·27	2·98	0·51	0·47	0·06	1·5
1921-1925 ..	1·34	0·06	1·26	0·24	0·51	2·58	3·03	0·47	0·46	0·07	1·5
1926	1·44	0·03	1·19	0·19	0·49	2·74	2·61	0·46	0·47	0·08	1·7
1927	1·42	0·03	1·15	0·20	0·48	2·95	2·93	0·42	0·47	0·08	1·
1928	1·44	0·04	1·10	0·15	0·50	2·94	2·42	0·46	0·55	0·06	1·7
1929	1·47	0·03	1·21	0·17	0·50	3·46	3·24	0·45	0·49	0·06	1·

See footnotes to Table E.

ABLE G, 1929.—POPULATION, AREA, DENSITY. · TOTAL BIRTHS AND DEATHS, WITH BIRTH AND DEATH RATES.

[INSTITUTION POPULATIONS, BIRTHS AND DEATHS, DISTRIBUTED.]

WARDS	Estimated Population	Area in Acres	Persons to an Acre	BIRTHS		DEATHS		Natural Rate of Increase
				Total	Rate per 1,000	Total	Rate per 1,000	
City	770,655	21,690	36	13,032	16·91	11,819	15·34	1·57
aints	27,032	300	90	457	16·91	419	15·50	1·41
wick	30,968	426	73	565	18·24	475	15·34	2·90
vick	32,716	254	129	533	16·23	481	15·01	1·22
kley	20,301	1,158	18	266	13·10	271	13·37	− 0·27
lford	27,173	790	36	500	17·71	396	14·02	3·69
etham	26,996	555	49	363	13·36	315	11·59	1·77
lton-cum-Hardy	36,735	1,666	22	458	12·47	486	13·23	− 0·76
egiate Church	18,778	446	42	296	15·76	328	17·47	− 1·71
hurst	26,531	231	115	550	20·73	399	15·04	5·69
npsall	12,056	2,203	5	206	17·09	177	14·68	2·41
bury	13,784	2,357	6	245	17·77	197	14·29	3·48
ange	500	61	8	1	2 00	3	6·00	− 4·00
on North	26,733	604	44	335	12·53	310	11·59	0·94
on South	25,438	628	41	495	19·46	349	13·70	5·76
urhey	26,140	342	77	365	13·96	367	14·04	− 0·08
nshulme	22,768	606	38	241	10·41	268	11·71	− 1·30
sight	21,940	593	37	292	13·17	296	13·49	− 0·32
lock Street	34,063	212	161	644	18·91	549	16·12	2·79
Platting	27,085	313	87	555	20·49	411	15·17	5·32
on	21,767	1,231	18	369	16·95	256	11·76	5·19
Side East	23,903	241	99	291	12·12	355	14·85	− 2·73
Side West	23,396	267	88	258	11·03	367	15·69	− 4·66
Cross	29,546	303	98	702	23·76	645	21·15	2·61
on Heath	20,992	1,007	21	313	14·91	359	17·10	− 2·19
shaw	26,748	482	55	403	15·07	407	15·21	− 0·14
rd	1,488	167	9	15	10·08	26	17·47	− 7·39
olme	21,286	806	26	278	13·06	273	12·83	0·23
nn's	190	55	3	...	...	2	10·53	− 10·53
lement's	6,418	181	35	148	23·06	121	18·85	4·21
eorge's	31,727	266	119	559	17·62	546	17·21	0·41
hn's	5,538	199	28	96	17·34	127	22·93	− 5·59
uke's	30,376	316	96	542	17·84	638	21·00	− 3·16
ark's	30,431	340	90	444	14·59	371	12·12	2·47
ichael's	19,838	243	82	470	23·49	442	22·24	1·25
ington	18,033	1,841	10	777	43·08	387	21·46	21·62

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he building estates in this ward have produced an addition of over 6,000 houses during the past few years. ould mean a corrected estimate of its population to over 40,000, therefore the rates as given must be red abnormal. Other wards are similarly affected, though to a much less degree.

TABLE II, 1929.

BIRTHS REGISTERED IN THE CITY OF MANCHESTER, IN WARDS, A
DISTINGUISHING LEGITIMATE AND ILLEGITIMATE BIRTHS; ALSO T
PROPORTION OF MORTALITY AMONG INFANTS OF BOTH CLASSES UN
ONE YEAR OF AGE.

WARDS	BIRTHS		Percentage of Illegitimate Births to Total Births	DEATHS UNDER 1 YEAR		PROPORTION OF DEATHS UNDER 1 YEAR PER 1,000 BIRT		
	Total	Illegitimate		Total	Of Illegitimate Children	Total	Legitimate	Il
City	**13,032**	**642**	**4·9**	**1,268**	**112**	**97**	**93**	**1**
All Saints	457	59	12·9	45	7	98	96	1
Ardwick	565	36	6·4	59	4	105	113	1
Beswick	533	22	4·1	51	1	96	98	
Blackley	266	8	3·0	25	1	94	93	1
Bradford	500	17	3·4	58	5	116	110	2
Cheetham	363	7	1·9	22	...	61	62	
Chorlton-cum-Hardy	458	14	3·1	24	2	52	50	1
Collegiate Church	296	24	8·1	38	5	128	121	2
Collyhurst	550	22	4·0	60	3	109	108	1
Crumpsall	206	3	1·5	18	1	87	84	3
Didsbury	245	10	4·1	12	1	49	47	1
Exchange	1	1	100·0	...	...	...	...	
Gorton North	335	13	3·9	33	3	99	93	2
Gorton South	495	17	3·4	38	1	77	80	
Harpurhey	365	16	4·4	36	7	98	83	4
Levenshulme	241	5	2·1	13	...	54	55	
Longsight	292	16	5·5	24	3	82	76	1
Medlock Street	644	36	5·6	73	3	113	115	
Miles Platting	555	13	2·3	57	2	103	101	1
Moston	369	4	1·1	18	1	49	47	2
Moss Side East	291	18	6·2	21	4	72	62	2
Moss Side West	258	26	10·1	29	6	112	99	2
New Cross	702	31	4·4	96	8	137	131	2
Newton Heath	313	7	2·2	26	1	83	82	1
Openshaw	403	19	4·7	43	...	107	112	
Oxford	15	1	6·6	1	...	66	71	
Rusholme	278	18	6·5	17	2	61	58	1
St. Ann's	...	...	...	...	...	...	...	
St. Clement's	148	7	4·7	25	1	169	170	1
St. George's	559	25	4·5	70	6	125	120	2
St. John's	96	9	9·4	18	4	187	161	4
St. Luke's	542	68	1·3	75	19	138	118	2
St. Mark's	444	30	6·8	34	2	77	77	
St. Michael's	470	28	6·0	56	4	119	118	1
Withington	777	12	1·5	53	5	68	63	4

TABLE I, 1929.

ANCHESTER.—Certification of the Causes of Death in the City and in the various Wards.

WARDS	Total Deaths	Certified by		Not Certified	Proportion per cent. of Deaths		
					Certified by		Not Certified
		Registered Medical Practitioners	Inquest		Regist'd Medical Prac-titioners	Inquest	
City	11,819	11,295	395	129	95.6	3·3	1·1
ints	419	396	17	6	94·5	4·1	1·4
ck	475	456	14	5	96·0	2·9	1·1
ck	481	456	22	3	94·8	4·5	0·7
ley	271	263	6	2	97·0	2·2	0·8
rd	396	384	12	...	97·0	3·0	...
ham	315	295	15	5	93·6	4·8	1·6
on-cum-Hardy	486	466	17	3	95·9	3·5	0·6
iate Church	328	307	16	5	93·6	4·9	1·5
urst	399	382	12	5	95·7	3·0	1·3
psall	177	167	7	3	94·3	3·9	1·8
ury.........	197	188	8	1	95·4	4·1	0·5
nge	3	3	...	...	100·0	...	...
n North......................	310	296	10	4	95·5	3·2	1·3
n South	349	334	11	4	95·7	3·2	1.1
rhey	367	353	11	3	96·2	3·0	0·8
shulme	268	255	9	4	95·1	3·4	1·5
ight	296	286	6	4	96·6	2·0	1 4
ck Street	549	532	13	4	96·9	2·4	0 7
Platting.....	411	397	12	2	96·6	2·9	0·5
n	256	249	5	2	97·3	1·9	0·8
Side East	355	333	13	9	93·8	3·7	2·5
Side West..................	367	352	12	3	95·9	3·3	0·8
Cross	645	621	15	9	96·3	2·3	1·4
n Heath	359	347	11	1	96·6	3·1	0·3
haw	407	384	18	5	94·4	4·4	1·2
d	26	26	...	...	100·0	...	...
lme	273	266	5	2	97·4	1·8	0·8
n's............................	2	2	...	...	100·0	...	...
ement's	121	114	7	...	94·2	5·8	...
orge's	546	527	16	3	96·5	2·9	0·6
hn's	127	116	6	5	91·4	4·7	3·9
ke's	638	606	19	13	95·0	3 0	2·0
ark's	371	358	10	3	96·5	2·7	0·8
ichael's	442	418	19	5	94·6	4 3	1·1
ngton	387	360	21	6	93·0	5·4	1·6

NOTIFIABLE INFECTIOUS DISEASES OTHER THAN WHOOPING COUGH AND TUBERCULOSIS.

The diseases included in the Infectious Disease (Notification) Acts, 1889 and 189 regulations under the Public Health Acts, are as follows:—Smallpox, Chicke Scarlet Fever, Diphtheria, Typhus Fever, Enteric or Typhoid Fever, Relapsing F Continued Fever, Puerperal Fever, Puerperal Pyrexia, Erysipelas, Ophthalmia Neonat Cerebro-Spinal Fever, Poliomyelitis, Polio-Encephalitis and Encephalitis-Letha Malaria, Dysentery, Acute Primary Pneumonia, Acute Influenzal Pneumonia, Me Rubella, and Pemphigus Neonatorum. The following cases were notified in 1929 the numbers are compared with the average of the previous ten years:—

	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	Mean
Smallpox	14	4	..	4	..	..	..	2	36	68	13
Chickenpox	1,153	1,936	2.443	2,860	3,354	3.574	4,105	5,783	3,823	3,777	3,281
Scarlet Fever	1,758	3,829	5,400	3,618	1,814	1,784	2,869	2,259	1,823	2,100	2,725
Diphtheria	471	914	1,002	806	536	570	1,040	1,145	1,208	1,033	873
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	90	54	74	36	50	103	65	30	18	32	55
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	159	146	138	130	130	115	179	174	107	133	141
Puerperal Pyrexia	..	..	..	..	..	..	..	32	102	66	20
Erysipelas	392	382	385	379	294	284	412	378	358	428	369
Ophthalmia Neonatorum	344	392	227	263	227	336	266	218	192	192	266
Cerebro-Spinal Fever	11	11	3	8	3	11	9	12	9	9	9
Poliomyelitis..	8	7	7	7	4	7	12	12	12	8	8
Polio-Encephalitis	4	1	..	..	..	1	4	2	..	2	1
Encephalitis-Lethargica	10	19	31	9	36	244	78	91	65	50	64
Malaria	312	172	38	19	16	3	4	1	3	15	58
Dysentery	6	9	8	3	2	2	1	2	2	13	5
Primary Pneumonia	410	620	1,578	2,268	2,067	2,203	2,200	1,876	2,260	2,176	1,766
Influenzal Pneumonia	816	205	218	487	426	447	351	313	690	363	432
Measles	8,420	10,635	1,135	19,614	3,481	18,349	7,941	10,953	13,987	7,141	10,166
Rubella	186	179	453	177	94	224	2,107	1,128	407	1,498	645
Pemphigus Neonatorum	..	..	..	..	..	..	83	128	116	106	43
	14,564	19,515	13,140	30,688	12,534	28,257	21,726	24,539	25,218	19,210	20,939

In 1900 Erysipelas was made notifiable, in 1910 Ophthalmia Neonatorum, in 1912 Cerebro-Spinal Fever Poliomyelitis. Measles and Rubella were made notifiable in 1916, and Polio-Encephalitis, Encephalitis-Lethar Malaria, Dysentery, Primary Pneumonia, Influenzal Pneumonia in 1919.

From 1919 (September) Chickenpox has been notifiable, and in 1925 (September) Pemphigus Neonato was made notifiable.

Puerperal Pyrexia was made notifiable on October 1st, 1926.

The deaths from the more common diseases are shown in the following figures:—

ars	Measles	Scarlet Fever	Diphtheria	Enteric Fever	Influenza	Whooping Cough	Diarrhœa	Phthisis
8–28 rage	170	37	78	10	369	117	222	920
29	60	11	57	6	704	220	185	930

Consultations.—One hundred and three consultation visits were made during the year by Medical Officers of the Department at the request of medical practitioners in the City in connection with the diagnosis of cases of infectious disease in which the nature of the illness was in doubt.

SMALLPOX.

Eight persons were notified to be suffering from smallpox in 1929 and were admitted to Clayton Vale Hospital. In addition, seven patients from outside areas received treatment at the hospital.

The disease in one instance, that of a male passenger, aged 34 years, on S.S. Tuscania, was of the confluent hæmorrhagic type and proved fatal within seven days of the onset. In the remainder the type was of the mild variety prevailing in this country.

Infection was introduced into the City on four separate occasions and all possible measures were taken to check its spread.

In order to assist in the control of smallpox, chickenpox continues to be compulsorily notifiable in the City, and Medical Officers of the Department are at the disposal of medical practitioners for consultation in any cases of llness of a suspicious nature which may occur in their practice. 51 such consultations were requested during the year, and apart from the smallpox cases the diagnosis arrived at in the remainder was as follows:—Chickenpox 26; erythema iris, papulata or multiforme, 10; acne 1; syphilis 1; impetigo 2; pityriasis 1.

TABLE SHOWING AGE, SEX, DATE OF ONSET, AND VACCINATION STATE OF SMALLPOX CASES, 1929.

Case No.	Age and Sex	Date of Onset	Vaccination State
1	M. 34	April 4th	Infancy.
2	M. 12	April 15th	Nil.
3	F. 22	May 3rd	Nil.
4	M. 58	May 4th	Infancy.
5	F. 19	May 8th	Nil.
6	F. 25	May 3rd	Nil.
7	F. 20	May 14th	Nil.
8	F. 5	November 24th	Nil.

CHICKENPOX.

Chickenpox was made a notifiable disease on September 15th, 1919, for six months, and its notifiability has been renewed from time to time since that date.

CHICKENPOX.—NUMBER OF ATTACKS AT DIFFERENT AGES DURING 1929.

Under 1 year	135
1—2 years	129
2—3 ,,	300
3—4 ,,	291
4—5 ,,	419
5—9 ,,	2,012
10—14 ,,	163
15—19 ,,	33
20—24 ,,	16
25—44 ,,	9
45— ,,	3
TOTAL	3,510

SCARLET FEVER.

The following figures show the course of the disease in quarters :—

TABLE I.—SCARLET FEVER.—ATTACKS IN QUARTERS ACCORDING TO DATE OF RASH.

Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
1924 ..	253	305	500	726	1784
1925 ..	662	642	802	763	2869
1926 ..	487	450	639	683	2259
1927 ..	362	397	441	623	1823
1928 ..	519	483	488	610	2100
5 years Mean ..	457	455	574	681	2167
1929 ..	442	428	608	840	2318

TABLE 2.—1929.—SCARLET FEVER ATTACKS IN WARDS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

WARDS	ATTACKS	ATTACK RATE PER 1,000 LIVING	† CASE FATALITY PER CENT.	REMOVALS TO HOSPITAL PER CENT.
City	2,318	3·0	0·6	74·7
All Saints	61	2.2	—	90.2
Ardwick	79	2.6	1.3	79.8
Beswick	87	2.6	2.3	90.8
Blackley	63	3·1	1.6	71·4
Bradford	103	3·7	—	78.6
Cheetham	71	2.6	—	66.2
Chorlton-cum-Hardy..	114	3·1	0.8	50·4
Collegiate Church ..	38	2.0	—	89·5
Collyhurst	87	3·3	1.2	91.9
Crumpsall	73	5·8	1·4	61.7
Didsbury	39	2.9	—	51·3
Exchange	2	4.0	—	100.0
Gorton North	33	1.2	—	45·5
Gorton South	105	4·1	1.0	84.8
Harpurhey	147	5·6	0.7	83·7
Levenshulme	102	4·5	—	49.0
Longsight	82	3·7	—	60.9
Medlock Street	77	2·3	—	85·5
Miles Platting	60	2.2	—	85.0
Moston	87	4.0	—	63.2
Moss Side East ..	43	1.8	—	67·4
Moss Side West ..	66	2.8	—	74·2
New Cross	86	2.9	2·3	91.9
Newton Heath	71	3·4	—	78.8
Openshaw	58	2.2	—	84·5
Oxford	9	6.2	—	100.0
Rusholme	45	2.1	—	55·6
St. Ann's	1	5.0	—	100.0
St. Clement's	33	5·1	—	93·9
St. George's	62	2.0	3·2	80.6
St. John's	4	0.7	—	100.0
St. Luke's	67	2.2	—	73·1
St. Mark's	96	3·2	—	77·1
St. Michael's	45	2·3	—	93·3
Withington	122	6.8	—	59·0

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† Corrected; the fatal cases are those actually occurring amongst the cases notified.

TABLE 3.—SCARLET FEVER.—NUMBER OF ATTACKS AND OF DEATHS; ALSO THE CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE THIRTY-EIGHT YEARS, 1891—1928 AND FOR 1929.

Ages	1891–1928			1929		
	Attacks	Deaths	Case Fatality per cent.	Attacks	Deaths	Case Fatality per cent.
Under 1 year	774	123	15·9	10	1	10.0
1 to 2 years ..	2262	310	13·7	20	2	10.0
2 to 3 ,, ...	5173	492	9·5	128	2	1.6
3 to 4 ,, ...	7262	537	7·4	157	2	1·3
4 to 5 ,, ...	8538	461	5·4	209	1	0.5
5 to 6 ,, ...	9520	296	3·1	259	1	0.4
6 to 7 ,, ...	8826	202	2.3	224	—	—
7 to 8 ,, ...	7748	140	1.8	233	1	0.4
8 to 9 ,, ...	6536	95	1·5	194	1	0.5
9 to 10 ,, ...	5412	81	1.5	175	—	—
10 to 15 ,, ...	16301	176	1.1	375	1	0.3
15 to 20 ,, ...	5152	71	1.4	155	—	—
20 to 25 ,, ...	2489	42	1.7	80	—	—
25 to 35 ,, ...	2310	48	2.1	70	—	—
35 to 45 ,, ...	706	18	2.5	23	1	4·5
45 and over	195	7	3·6	6	—	—
All ages	89204	3099	3·5	2318	13	0.6

TABLE 4.—SCARLET FEVER MORTALITY, 1929.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1924	1925	1926	1927	1928	Mean	1929
England and Wales	0·02	0·03	0·02	0·01	0·01	0·02	0·02
107 Great Towns	0·03	0·03	0·02	0·01	0·02	0·02	0·02
London	0·03	0·02	0·02	0·01	0·02	0·02	0·02
Manchester City	0·04	0·07	0·03	0·03	0·02	0·04	0·01
157 Smaller Towns	0·02	0·02	0·02	0·01	0·01	0·02	0·02

SCARLET FEVER, 1929.—ATTACKS IN WEEKS, ACCORDING TO DATE OF RASH.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Week of Year	1929	Week of Year	1929	Week of Year	1929	Week of Year	1929
1	46	14	24	27	42	40	49
2	50	15	31	28	42	41	59
3	45	16	24	29	48	42	78
4	36	17	30	30	32	43	74
5	44	18	28	31	40	44	75
6	35	19	44	32	40	45	59
7	34	20	41	33	22	46	61
8	32	21	36	34	38	47	70
9	29	22	37	35	39	48	91
10	24	23	38	36	43	49	57
11	36	24	29	37	64	50	67
12	31	25	37	38	42	51	53
13	29	26	46	39	70	52	47
Total ..	471	Total ..	445	Total ..	562	Total ..	840

City total, 1929—2,318.

SCARLET FEVER "RETURN" CASES, 1929.

Out of 1,731 discharges from Monsall Hospital, 70 gave rise to at least 7 "return" cases, a "return" case rate of 4·0. In addition, 12 others contracted the disease indirectly from a returned patient.

Table showing the interval between return home of hospital patients an onset of illness in "return" cases.

Days	0–6	7–13	14–20	21–27
No. of Cases	22	24	14	10

DIPHTHERIA.

The usual tables for this disease are given below.

The following table shows the number of cases notified each year for the last ten years :—

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
914	1,002	806	536	570	1,040	1,145	1,208	1,033	761

TABLE I.

DIPHTHERIA, 1929.—ATTACKS IN WEEKS, ACCORDING TO DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Week of Year	1929	Week of Year	1929	Week of Year	1929	Week of Year	1929
1	8	14	11	27	11	40	17
2	7	15	17	28	12	41	26
3	14	16	13	29	13	42	20
4	16	17	19	30	19	43	22
5	17	18	14	31	7	44	24
6	12	19	13	32	8	45	23
7	10	20	5	33	15	46	12
8	19	21	7	34	13	47	16
9	15	22	3	35	14	48	17
10	9	23	12	36	16	49	20
11	16	24	9	37	24	50	21
12	17	25	14	38	21	51	18
13	12	26	10	39	11	52	22
Total ..	172	Total ..	147	Total ..	184	Total ..	258

CITY TOTAL, 1929—761.

The following table shows that the number of attacks is highest in childre up to 10 years.

TABLE II.

DIPHTHERIA.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY A DIFFERENT AGES FOR THE THIRTY-EIGHT YEARS, 1891-1928, AND FO 1929.

Ages	1891-1928			1929		
	Attacks	Deaths	*Case Fatality %	Attacks	Deaths	*Case Fatality %
Under 1 year	489	278	56.9	15	7	46.7
1 to 2 years.. ..	1301	590	45.3	23	5	21.7
2 to 3 ,, ...	1777	542	30.5	63	11	17.5
3 to 4 ,, ...	2205	513	23.3	67	7	10.5
4 to 5 ,, ...	2372	471	19.9	76	8	10.5
5 to 6 ,, ...	2450	394	16.1	95	5	5.3
6 to 7 ,, ...	1985	240	12.1	74	4	5.4
7 to 8 ,, ...	1538	166	10.8	65	3	4.6
8 to 9 ,, ...	1214	131	10.8	60	2	3.3
9 to 10 ,, ...	916	82	8.9	52	3	5.8
10 to 15 ,, ...	2686	126	4.8	94	1	1.1
15 to 20 ,, ...	1125	42	3.7	31	—	—
20 to 25 ,, ...	721	18	2.5	24	1	4.2
25 to 35 ,, ...	896	23	2.6	11	—	—
35 to 45	382	7	1.8	8	1	12.5
45 and over	188	15	7.9	3	1	33.3
All ages	22245	3638	16.3	761	59	7.8

* The percentages in this column are the actual proportions of fatal cases to the attacks at those ages.

The comparison of the case fatality of 1929 (7·8) with that for the previou 19 years is matter for satisfaction.

The case fatality at all ages since 1910 has been as follows :—

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919
19·9	16·5	20·0	14·9	14·3	18·8	11·7	10·8	10·8	9·1

1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
7·3	8·7	9·8	9·5	9·3	8·8	8·6	8·3	8·1	7·8

From the following table we see that the apparent incidence of the disease was greatest in the wards of Didsbury, St. Clement's, Miles Platting, New Cross, and Withington. The percentage of removals is 85.9. The disease is one which yields good results to isolation and care in removing infection.

TABLE III.

DIPHTHERIA, 1929.—ATTACKS IN WARDS, WITH ATTACK RATE, CASE FATALITY PER CENT., AND REMOVALS TO HOSPITAL PER CENT.

Wards	Attacks	Deaths	Attack Rate per 1000 Living	† Case Fatality per cent.	Removals to Hospital per cent.
City	761	59	1·0	7·8	85·9
All Saints	18	1	0.7	5·6	94·4
Ardwick	30	3	1.0	10.0	96.6
Beswick	39	4	1.2	10.3	94·9
Blackley	24	7	1.2	29.2	100.0
Bradford..	34	—	1.2	—	91.2
Cheetham	31	2	1.1	6.5	87.1
Chorlton-cum-Hardy ..	42	1	1.1	2.4	45·2
Collegiate Church ..	21	3	1.1	14.3	90.5
Collyhurst	22	1	0.8	4·5	95·5
Crumpsall	4	—	0.3	—	100.0
Didsbury	34	1	2.5	2.9	91.1
Exchange	—	—	—	—	—
Gorton North	23	2	0.9	8.7	82.6
Gorton South	28	1	1.1	3.6	85·7
Harpurhey	20	—	0.8	—	90.0
Levenshulme	6	2	0.3	33·3	66.6
Longsight	17	2	0.8	11.8	64.7
Medlock Street	33	2	1.0	6.1	90.9
Miles Platting	46	3	1.7	6.5	93·4
Moston	7	—	0.3	—	85·7
Moss Side East	14	1	0.6	7·1	71·4
Moss Side West	23	2	1.0	8.7	65.2
New Cross	40	1	1.4	2.5	90.0
Newton Heath	23	2	1.1	8.7	95.6
Openshaw	33	2	1.2	6.1	81.8
Oxford	1	—	0.7	—	—
Rusholme	14	—	0.7	—	57·1
St. Ann's	—	—	—	—	—
St. Clement's..	14	—	2.2	—	100.0
St. George's	28	4	0.9	14.3	96.4
St. John's	6	—	1.1	—	100.0
St. Luke's	30	4	1.0	13.3	86.7
St. Mark's	15	2	0.5	13·3	93.3
St. Michael's	18	3	1.0	16.6	88.8
Withington	23	3	1.3	13.0	82.6

† Corrected; the fatal cases are those actually occurring amongst the cases notified.

TABLE IV.

DIPHTHERIA MORTALITY, 1929.—RATE PER 1,000 LIVING COMPARED WITH MEAN OF FIVE YEARS.

	1924	1925	1926	1927	1928	Mean	1929
England and Wales.......	0·06	0·07	0·07	0·07	0·06	**0·07**	0·08
107 Great Towns.........	0·08	0·09	0·10	0·08	0·09	**0·09**	0·09
London	0·12	0·11	0·12	0·09	0·09	**0·11**	0·08
Manchester City.......	0·08	0·13	0·14	0·12	0·13	**0·12**	0·07
157 Smaller Towns	0·06	0·06	0·06	0·05	0·08	**0·06**	0·07

Examination of "Contacts."

So far as was practicable, swabs were taken from the throats and noses of members of each family under 14 years of age in which there had occurred a positive case of diphtheria.

In all, 1,013 persons were swabbed and 50, or 4·9 per cent., were found to be harbouring the diphtheria bacillus.

With a few exceptions these were admitted to Monsall Hospital and kept under observation until three successive swabs proved negative.

Supply of Antitoxin.

Diphtheria antitoxin (in phials containing 8,000 units concentrated) is supplied free to all medical practitioners in the City and may be obtained by them at any time during office hours from the Public Health Office, or from the following Fire Stations :—Ash Street, Harpurhey ; New Street, Miles Platting ; Pollard Street, Ancoats ; and Upton Street, Chorlton-upon-Medlock, and all district police stations at any time during the day or night. The total quantity supplied in this manner was 4,312,000 units (or 539 phials), at a cost of £185.

Diphtheria Immunisation.

The "Schick" test is a simple means of gauging the susceptibility of ndividuals of diphtheria infection. The knowledge thus gained enables subsequent immunisation of susceptible persons to be carried out. The value of this procedure has been proved in this and other countries. At Monsall Hospital much work has been done on these lines with successful results, and it is now the practice to test and immunise all members of the nursing staff employed at the hospital and any patients, whose parents desire it, during their convalescence from other fevers.

Community Immunisation

On June 6th, 1928, the Manchester City Council approved a scheme for the free provision of the necessary material for "Schick" testing and mmunisation against diphtheria to general medical practitioners for use in their private practices, and for immunisation to be carried out at the Public Health Department, Civic Buildings, at the Maternity and Child Welfare Centres, and at schools and school clinics.

In the following table are shown the numbers dealt with during 1929 :—

SUSCEPTIBILITY TESTS AND ACTIVE IMMUNISATION BY THE PUBLIC HEALTH DEPARTMENT, 1929.

	Monsall Hospital				Child Welfare Centres		Schools (4)		Public Health Office		General Prac-titioners		TOTA	
	Nurses		In-patients											
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	
Schick Tests	62	94	629	1,379	13	2	130	72	27	17	4	0	865	1,
Number Immunised ..	38		478		1,070		1,180		173		45		2.984	
Diphtheria Prophylactic Injections	114		1,434		3,130		3,577		538		137		8 93	

Ninety-four per cent. received the full course of injections, and no case of diphtheria has been notified during the year in a fully immunised person.

VIRULENCE TESTS.

The value of testing the virulence of diphtheria bacilli in certain cases lies in the fact that, in the past, harbourers of the bacillus have been kept in isolation, sometimes for long periods, irrespective of whether or not the organisms present were virulent. In cases where the test is negative the organisms are incapable of provoking disease, and isolation of the individual is unnecessary and uneconomic.

Table V. shows that during the year virulence tests were carried out in 38 cases, with 21 positive and 17 negative results.

TABLE V.

VIRULENCE TESTS, 1929.

Nature of case	Number in which diphtheria bacilli were present	Result of test	
		Virulent	Non-virulent
Diphtheria Cases	22	12	10
Diphtheria "Contacts" ..	4	2	2
Persons with Rhinitis ..	6	4	2
Other Cases..	6	3	3
Total	38	21	17

* ENTERIC FEVER.

The number of cases of enteric fever notified during 1929 was 41.

Table I. shows the attack and death-rates compared with those for England and Wales since 1908.

Table I.

Incidence of and Death-rate from Enteric Fever in Manchester.

Number of Notified Cases, Deaths, and Death-rates per 1,000 *living from Enteric Fever in each of Twenty-two successive Years.*

Year	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918
No. of cases notified and accepted ...	393	369	358	256	242	292	156	174	78	86	68
No. of deaths.	75	71	62	46	43	47	34	46	22	10	10
Death - rate — Manchester	0·11	0·13	0·09	0·07	0·06	0·06	0·05	0·06	0·03	0·01	0·01
Death - rate — England and Wales...	0·07	0·06	0·05	0·07	0·04	0·04	0·05	0·04	0·03	0·03	0·03

Year	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
No. of cases notified and accepted . .	90	54	74	36	50	103	65	30	18	32	41
No. of deaths	19	13	12	4	8	14	8	9	1	4	7
Death-rate — Manchester	0·02	0·02	0·02	0·01	0·01	0·02	0·01	0·01	0·00	0·01	0·01
Death-rate — England and Wales. .	0·01	0·01	0·02	0·01	0·01	0·01	0·01	0·01	0·01	0·01	0·01

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* Including typhoid and paratyphoid.

Table II. shows at what ages enteric fever appears to be most prevalent and also at what ages it is most fatal.

TABLE II.

ENTERIC FEVER.—NUMBER OF ATTACKS, OF DEATHS, AND CASE FATALITY PER CENT. AT DIFFERENT AGES FOR THE THIRTY-NINE YEARS, 1891-1929.

Ages	1891-1929		
	Attacks	Deaths	Case Fatality Per cent.
Under one year	20	9	45·0
1 to 2 years	56	8	14·3
2 „ 3 „	120	17	14·2
3 „ 4 „	174	22	12·6
4 „ 5 „	229	25	10·9
5 „ 6 „	264	28	10·6
6 „ 7 „	262	26	9·9
7 „ 8 „	246	20	8·1
8 „ 9 „	260	22	8·5
9 „ 10 „	259	26	10·1
10 „ 15 „	1,488	161	10·8
15 „ 20 „	1,624	292	17·9
20 „ 25 „	1,580	311	19·7
25 „ 35 „	2,336	541	23·2
35 „ 45 „	1,149	335	29·2
45 and over	804	267	33·2
All ages	10,871	2,110	19·4

TABLE III.

ENTERIC FEVER ATTACKS IN WEEKS REPORTED IN 1929, ACCORDING TO DATE OF ONSET.

FIRST QUARTER		SECOND QUARTER		THIRD QUARTER		FOURTH QUARTER	
Week of Year	1929	Week of Year	1929	Week of Year	1929	Week of Year	1929
1	—	14	2	27	—	40	1
2	—	15	—	28	1	41	3
3	—	16	—	29	—	42	1
4	2	17	—	30	1	43	1
5	1	18	1	31	1	44	1
6	—	19	2	32	1	45	3
7	—	20	—	33	1	46	1
8	—	21	—	34	2	47	—
9	—	22	—	35	—	48	—
10	—	23	—	36	2	49	2
11	—	24	1	37	3	50	—
12	1	25	—	38	1	51	1
13	1	26	—	39	1	52	2
Total ..	5	Total ..	6	Total ..	14	Total ..	16

City total, 1929—41.

TABLE IV.

ENTERIC FEVER MORTALITY, 1929.—RATE PER 1,000 LIVING, COMPARED WITH MEAN OF FIVE YEARS.

	1924	1925	1926	1927	1928	Mean	1929
England and Wales... ..	0·01	0·01	0·01	0·01	0·01	**0·01**	0·01
London	0·01	0·01	0·01	0·01	0·01	**0·01**	0·01
CITY OF MANCHESTER.. ..	0·02	0·01	0·01	0·00	0·01	**0·01**	0·01

Number of Cases.

Fifty-two notifications of enteric fever were received. Two of these, which related to persons whose illness began in 1928, were recorded in the Annual Report for that year. The diagnosis was amended and the notifications subsequently withdrawn in 12 instances. The number of persons attacked therefore was 38, 24 of whom were infected by B. typhosus and 14 by B. paratyphosus B.

Source of Infection.

The source of infection remained obscure in 30 cases, which number included 7 persons infected outside the City area. 5 persons were directly infected by patients known to have the disease, and in 3 of the typhoid cases mussels had been eaten at a time prior to the illness compatible with infection being derived from them. The suspected mussels were imported into this country and were derived from layings known to be liable to pollution. Powers to deal satisfactorily with such a situation are insufficient, but the Markets Department were able to obtain an undertaking from the dealers that shell-fish from the layings in question would not be marketed within the City until adequate means of purification had been adopted at the source.

Examination of "Contacts."

Specimens of blood were obtained whenever possible from household "contacts" in order to ascertain the extent of infection among persons closely associated with the patients. In this way 61 specimens were submitted for examination two of which gave positive Widal reactions. Repeated bacteriological tests in these two cases produced no evidence of active or passive infection.

In view of the occurrence recently in this and other countries of cases of undulant fever, all specimens of blood sent to the Public Health Laboratory are now tested for agglutination reaction with the causative organism which is known as Brucella abortus. The results obtained from these examinations have so far proved negative.

CEREBRO-SPINAL FEVER.

Seventeen cases of cerebro-spinal fever were notified in 1929, the diagnosis being confirmed in each case by the presence of the meningococcus in the cerebro-spinal fluid. The sex and age of those affected and the dates of onset of illness were as follows :—

Sex	Age	Onset	Sex	Age	Onset
M	2	December 28th	M	$2\frac{8}{12}$	July 4th
M	19	January 17th	M	26	July 3rd
M	$\frac{4}{12}$	February 3rd	M	61	July 23rd
M	$1\frac{10}{12}$	March 22nd	F	$1\frac{4}{12}$	July 24th
F	$1\frac{2}{12}$	April 22nd	F	$\frac{6}{12}$	November 3rd
F	2	May 2nd	M	$1\frac{2}{12}$	November 2nd
F	$\frac{5}{12}$	May 10th	M	7	November 29th
M	$1\frac{1}{2}$	May 26th	F	20	December 17th
F	30	May 26th			

POLIOMYELITIS.

ticulars of notified cases of poliomyelitis for 1929 are given in the following table :—

Sex	Age	Ward	Onset	Notified	Paralysis	Result—Jan., 1930
M	5	St. George's.	Aug. 5	Aug. 8	Left leg	Recovered
F	6	Withington. .	Sept. 15	Sept. 30	Right leg	Recovered
F	3	St. George's.	Oct. 4	Oct. 8	Left leg	Recovered
F	16	Medlock St.	Dec. 7	Dec. 12	Right leg and hand	Recovered

ENCEPHALITIS LETHARGICA.

Forty notifications of encephalitis lethargica were received from medical practitioners in 1929. The diagnosis was accepted in 37 cases and was amended in the other 3 to acute intestinal obstruction, cerebral tumour, and tubercular meningitis respectively.

Of the 37 persons affected, 10 began their illness in or prior to 1927, 3 in 1928, and 24 in 1929.

The number of deaths from this disease during the year was 24, 7 occurring amongst persons notified in previous years.

The mortality rate of notified cases in 1929 was 45.9 per cent. compared with 48.0 in 1928 and 38.5 in 1927.

The number of new cases notified annually in the City continues to show slight but progressive decline, the decreased incidence in 1929 being especially noticeable among adults.

The fate of persons attacked by the disease since 1918, so far as it has bee ascertained, is given in Table III. During the whole of the period 670 cases were notified, of which 260 or 38.8 per cent. have, up to now, ended fatally 117 remain untraced or have not recently been visited, or it is too early to judge of their permanent condition. Of the remaining 293, 71 have entirely recovered, 121 are partially, and 101 wholly, disabled.

Accommodation for children suffering from the after effects of encephaliti lethargica is provided at the Swinton Home, where they are under medica supervision and attend special educational classes. Adult sufferers are admitted to one or other of the municipal hospitals. The scheme for the provision of additional institutional accommodation for special groups of cases which has been in contemplation is for the time being in abeyance, owing to the changed conditions brought about by the Local Government Act.

TABLE I.

ENCEPHALITIS LETHARGICA.—ATTACKS IN AGE GROUPS, MANCHESTER, 1929.

Years	0–5	5–10	10–20	20–30	30–40	40–50	50 and over	All ages
Males	1	..	7	3	2	4	5	22
Females	1	..	5	1	2	2	4	15
Total	2	..	12	4	4	6	9	37

TABLE II.

ENCEPHALITIS LETHARGICA.—MORTALITY IN AGE GROUPS AMONGST NOTIFIED CASES, MANCHESTER, 1929.

Years	All Ages	0–10	10–20	20–30	30–40	40–50	50 and over
Number of Cases	37	2	12	4	4	6	9
Number of Deaths	17	1	4	1	2	3	6
Mortality Rate (per cent).. ..	45·9	50·0	33·3	25·0	50	50	66·6

FATE OF ENCEPHALITIS LETHARGICA PATIENTS, DECEMBER, 1929.

(1) *Patients under the age of 16 at time of notification.*

Year	No. of cases notified	A	B				C				D
		No. known to be alive and apparently well, Jan., 1929	No. suffering from sequelæ		No. (among B) in whom changes of character have occurred	No. (among B) in whom "Parkinsonism" has supervened	No. of patients known to have died				No. of patients untraced or unvisited
			Interfering with schooling or other occupation	Preventing normal schooling or normal occupation			0–1 months after onset	2–6 months after onset	7–12 months after onset	Over 1 year after onset	
1919	10	1	—	—	—	—	6	3	—	—	—
1920	7	—	2	1	1	2	4	—	—	—	—
1921	9	3	2	—	1	—	4	—	—	—	—
1922	3	1	—	1	—	1	—	—	1	—	—
1923	12	2	6	1	4	3	3	—	—	—	—
1924	97	19	23	29	17	25	16	2	—	8	—
1925	19	3	4	2	2	4	5	—	—	3	2
1926	19	3	2	—	—	—	9	1	1	—	3
1927	15	2	3	—	—	—	5	1	—	1	3
1928	7	—	2	—	—	—	2	—	—	—	3
1929	9	—	—	1	—	—	3	—	—	—	5

(2) *Patients over the age of 16 at the time of notification.*

1919	—	—	—	—	—	—	—	—	—	—	—
1920	12	—	2	1	—	3	5	3	—	1	—
1921	22	4	5	3	2	4	6	3	1	—	—
1922	6	1	1	—	—	1	—	2	1	—	1
1923	24	4	4	2	2	4	9	4	—	1	—
1924	147	23	22	19	5	21	18	13	2	10	40
1925	59	4	8	18	2	20	7	7	2	10	3
1926	72	1	16	12	1	20	9	5	2	6	21
1927	50	—	10	5	—	10	10	1	1	6	17
1928	43	—	7	5	—	3	8	6	2	7	8
1929	28	—	2	1	—	1	4	2	1	7	11

BACTERIOLOGICAL EXAMINATIONS MADE FOR THE COUNTY BOROUGH OF MANCHESTER DURIN THE YEAR 1929, PUBLIC HEALTH LABORATORY UNIVERSITY OF MANCHESTER.

Month	Diphtheria		Typhoid	Tuberculosis				Water	
				Sputum		Milk		Bacterio-logical	Chemica
	Total	+	Total	Total	+	Total	+	Total	Total
January	605	36	13	195	35	123	10	—	—
February	468	41	10	183	26	104	16	—	—
March	398	22	13	206	37	91	8	—	—
April	501	42	19	234	52	126	13	—	—
May	461	23	12	190	42	80	4	—	—
June	524	33	8	143	24	79	7	—	—
July	497	43	13	150	32	103	12	—	—
August	451	38	20	117	24	83	3	—	—
September	570	59	24	154	31	94	7	—	—
October	730	60	37	181	33	109	9	—	—
November	715	52	33	169	25	83	14	—	—
December	606	50	9	144	25	58	8	—	—
Total	6526	499	231	2066	386	1133	111	—	—

Total specimens enumerated above—9,956. Other investigations 562, under :—

Milks—Coli, etc.	386
Chemical examination	39
Fæces and urine (for typhoid, tuberculosis, dysentery, etc.)	34
Urine (for tubercle bacilli, etc.)	11
Swabs, pleural fluid, pus, etc.	41
Diphtheria, testing virulence	43
Food poisoning (various specimens connected with)	2
Water from swimming baths	2
Sewage effluent	1
Vaccine	1
Various (Others)	2
	562

MEASLES AND GERMAN MEASLES.

	1929				
Cases Notified	1st quarter	2nd quarter	3rd quarter	4th quarter	Total
Measles—					
By Doctors	367	1,282	2,040	3,574	7,263
„ Others	79	272	681	1,217	2,249
Total	446	1,554	2,721	4,791	9,512
German Measles—					
By Doctors	89	166	93	97	445
„ Others	4	18	17	15	54
Total	93	184	110	112	499

deaths from measles in successive years are shown in the following table :—

Table I.

Deaths from Measles in the City of Manchester during the Ten Years 1920–1929.

	Under One Year			Years of Age				Total 5 Years and upwards	Total deaths at all ages
s	Under 3 Months	3-5 Months	6-11 Months	1-	2-	3-	4-		
0	0	8	45	67	39	17	15	19	210
1	0	0	0	1	1	0	0	1	5
2	1	6	83	159	65	13	10	17	354
3	0	2	12	46	15	3	2	3	83
4	2	5	63	168	62	25	28	17	370
5	2	0	25	46	24	17	9	6	129
6	1	2	29	80	26	9	4	5	156
7	1	5	39	65	23	14	9	8	164
8	1	5	41	43	22	4	5	2	123
9	0	1	17	28	4	6	2	2	60

TABLE 2.

INCIDENCE OF MEASLES IN MANCHESTER DURING THE YEAR 1929 ACCORDING TO AGE GROUPS.

Disease	Under 5 years	5 years and over	Total
Measles	6,059	3,453	9,512

TABLE 3.—MEASLES, DEATHS IN QUARTERS.

YEAR	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1901–1910 (mean)..	80	122	68	59	329
1911–1920 (mean)..	87	125	33	32	277
1921	1	2	0	2	5
1922	1	162	161	30	354
1923	13	42	21	7	83
1924	39	295	34	2	370
1925	17	27	8	77	129
1926	117	36	1	2	156
1927	3	2	11	148	164
1928	101	17	5	0	123
1929.............	4	7	19	30	60

In table 4 is given a comparison of Manchester mortality with that occurring in other districts.

Table 4.—Measles Mortality Rates.—Rate per 1,000 Living, compared with Mean of Five Years.

	1924	1925	1926	1927	1928	Mean 5 years	1929
England and Wales	0·12	0·13	0·09	0·09	0·11	**0·11**	0·08
107 Great Towns	0·18	0·17	0·12	0·12	0·15	**0·15**	0·12
London	0·29	0·08	0·02	0·04	0·30	**0·15**	0·04
City of Manchester ...	0·48	0·17	0·20	0·21	0·16	**0·24**	0·08
157 Smaller Towns......	0·08	0·15	0·07	0·07	0·08	**0·09**	0·06

WHOOPING COUGH.

The cases of this disease notified are obtained entirely through the schools, and the same disabilities attach to this mode of notification as were experienced in measles. Notwithstanding, these notifications are useful. The cases are visited and dealt with by the Health Visitors in the same manner as cases of measles.

Whooping cough notifications during 1929 :—

	First quarter	Second quarter	Third quarter	Fourth quarter	Total
1929	2,147	1,380	381	129	4,037

Table 1.

Whooping Cough Mortality.—Rate per 1,000 Living, compared with Mean of Five Years.

	1924	1925	1926	1927	1928	Mean 5 years	1929
England and Wales	0·10	0·15	0·10	0·09	0·07	**0·10**	0·15
107 Great Towns	0·12	0·18	0·10	0·10	0·09	**0·12**	0·19
London	0·11	0·19	0·05	0·12	0·09	**0·11**	0.26
City of Manchester	0.15	0.27	0.08	0.16	0.12	**0·16**	0·29
157 Smaller Towns........	0·09	0·14	0·11	0·08	0·06	**0·10**	0·15

TABLE 2.—WHOOPING COUGH, DEATHS IN QUARTERS.

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Whole Year
1911–1920 (Mean)..	59	73	24	17	173
1921	40	78	31	20	169
1922	24	37	25	13	99
1923	48	113	12	11	184
1924	26	53	10	27	116
1925	89	81	23	13	206
1926	16	18	15	12	61
1927	72	35	9	8	124
1928	14	24	16	35	89
1929	142	61	9	8	220

TABLE 3.

INCIDENCE OF WHOOPING COUGH (KNOWN CASES) IN MANCHESTER DURING THE YEAR 1929, ACCORDING TO AGE GROUPS.

Disease	Under 5 years	5 years and over	Total
Whooping Cough	2,789	1,248	4,037

A COMPARISON OF MORTALITY FROM SCARLET FEVER, DIPHTHERIA, MEASLES, AND WHOOPING COUGH.

The subjoined table shows that, as causes of death, either measles or whooping cough greatly exceed scarlet fever and diphtheria together.

YEAR	WHOOPING COUGH		MEASLES		SCARLET FEVER		DIPHTHERIA	
	Known Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
1920	2,290	84	10,635	210	3,829	46	914	67
1921	4,415	169	1,135	5	5,400	59	1,002	90
1922	2,160	99	19,659	354	3,618	55	806	79
1923	3,804	184	3,482	84	1,920	31	564	47
1924	1,706	116	18,349	370	1,784	33	570	53
1925	3,333	206	7,941	129	2,869	63	1,040	91
1926	2,094	61	10,953	156	2,259	25	1,145	103
1927	2,244	124	13,987	164	1,823	20	1,208	91
1928	3,189	89	7,141	123	2,100	14	1,033	99
1929	4,037	220	9,512	60	2,318	11	761	57
Total	*29,272	1,352	102,794	1,655	27,920	357	9,043	774
Manchester—Case fatality rate per cent.	4·6		1·6		1·3		8·6	

* It should be pointed out that the estimated number of cases (29,272) occurring during the 10 years does not represent all the actual cases. Since this disease is not notifiable by medical practitioners, many cases escape our notice.

DIARRHŒA.

Table 1.—1929.—Diarrhœa and Simple Cholera Mortality: Deaths under Two Years of Age per 1,000 Births, compared with the Mean of Five Years.

	1924	1925	1926	1927	1928	Mean 5 years	1929
England and Wales........	7·3	8·4	8·7	6·3	7·0	7·7	8·1
107 Great Towns	9·2	10·8	11·8	8·3	9·6	9·9	10·9
London	8·4	10·6	11·8	7·5	10·2	9·7	10·7
City of Manchester	11·1	15·1	16·3	11·5	15·3	13·9	13·7
157 Smaller Towns........	6·2	7·6	6·6	5·0	4·8	6·0	5·9

The number of deaths in successive years, and their distribution in quarters of the year, are exhibited in the following figures :—

Table 2.—Diarrhœa and Simple Cholera Deaths in Quarters, 1920–1929.

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
First Quarter....	45	59	38	53	51	40	41	32	44	38
Second Quarter..	54	59	59	45	51	38	43	34	48	45
Third Quarter ..	63	139	44	40	46	93	60	49	42	38
Fourth Quarter..	88	130	50	64	63	56	93	36	64	58
	250	387	191	202	211	227	237	151	198	179

In 1929 the temperature during the third quarter was about 2° above the average, whilst the rainfall was about the average.

TABLE 3.

Third Quarter of the years	Mean Temperature	Rainfall, Inches	Humidity, per cent.	Diarrhœa and Simple Cholera Mortality. Annual Rate (third quarter) per 1,000 living
1891-1900 Mean	59°·2	9·9	76%	4·04
1901-1910 Mean	59°·1	8·5	77%	2·81
1911-1920 Mean	59°·4	9·6	78%	1·32
1921-1925 Mean	59°·0	10·6	79%	0·39
1926	61°·8	9·9	76%	0·31
1927	59°·2	14·7	80%	0·26
1928	59°·2	8·1	75%	0·26
1929	61°·1	9·9	78%	0·18

DYSENTERY.

Three cases of bacillary and one of amœbic dysentery came to the notice of the Health Department during the year.

The amœbic case, aged 38 years, who contracted the disease in India, died.

During the year the 23 cases of dysentery and 10 carriers which are known to the Department have been visited each six months. The investigation of the health of the members of the patients' families so far revealed no suspicious symptoms.

FOOD POISONING.

No outbreak of food poisoning was recorded in 1929.

MALARIA.

Fourteen cases of malaria were notified during 1929. The patients contracted t whilst living abroad.

During the year two deaths occurred from this disease.

ANTHRAX.

No cases of anthrax were notified during the year 1929.

VENEREAL DISEASES.

There are five main centres in the City and one in Salford for the fre examination and treatment of persons suffering from venereal diseases. A certain number of cases are also treated at the Crumpsall Infirmary. Detail of all the work carried out are given in the accompanying tables.

At the main centres, 15 male and 20 female clinics are held each week In addition, a pre-maternity clinic with morning and afternoon sessions i held each week at two of the child welfare centres, where mothers and babie suffering from or suspected to be suffering from venereal disease are examine and receive any necessary treatment.

Intermediate treatment for male and female patients is given every da at St. Luke's Hospital, and on one day a week at St. Mary's Hospital fo women.

The auxiliary centre for females which was established in the grounds o Monsall Hospital in 1920 is also open daily, including Sundays, for the intermediate treatment of patients attending any of the authorised clinics or wh may be sent for the purpose by medical practitioners. The centre forms useful addition to the original scheme, and the attendance of patients is, o the whole, very good.

The total number of persons attending the clinics during 1929 was 9,030 which compares with 9,306 in 1928, and 8,770 in 1927. Of those who presente themselves, 1,472 were found not to be suffering from venereal disease Excluding such persons, who attended on one or two occasions only, th average number of attendances by persons in the syphilis section was 9· and in the gonorrhœa section 13·6, compared with 9·5 and 11·1 respectivel in 1928. These figures do not give a true indication of the number of attendance of the majority, as the few attendances of many defaulters are included i the calculation. In the gonorrhœal section females attended more regularl than males, which may be accounted for by the greater facilities afforded fo intermediate treatment. The new irrigation cubicles completed and extende during the year at St. Luke's Hospital are greatly appreciated by the patients and are responsible for the increase in attendances at this institution.

The number of new cases of syphilis treated at the centres during 1929 wa 1,297 and of gonorrhœa 1,768. These figures compare with 1,323 and 1,68 respectively for 1928. The number of gonorrhœa cases again exceeds the numbe of syphilis cases, and, although the figures in no way represent the relativ frequency of the two diseases in the community, it is encouraging to note th increasing attendance of persons afflicted with gonorrhœa.

The number of persons ceasing to attend before treatment is completed, o before the final tests of cure have been applied, remains about constant an approaches one fourth of the total. In a proportion of these cure may b assumed, but a considerable number, it is to be feared, remain in a contagiou condition and are potential spreaders of infection. In order to stimulat resumption of treatment letters are sent to defaulters, and this procedure i attended with some success as is indicated by the results shown in Table V.

MEDICAL PRACTITIONERS AND THE SCHEME.

Members of the medical profession in the City are from time to time advised of the facilities offered for the diagnosis and treatment of venereal disease. In the circular-letter sent out the arrangements are given in detail under the following heads :—

1. Provision of laboratory facilities for diagnosis.
2. Treatment centres and clinics.
3. Supply of approved arsenobenzene compounds.
4. The auxiliary centre for females.
5. Instructions to medical practitioners, patients, and the public.

The attendance of medical practitioners at the several clinics during the year is shown in the following table :—

Particulars	Manchester Royal Infirmary	Ancoats Hospital	Skin Hospital	St. Luke's Hospital	St. Mary's Hospital	Total
Number of Medical Practitioners attending Clinic	18	6	Nil	3	Nil	27
Number of attendances.	178	14	Nil	22	Nil	214

At the end of 1929 there were 56 medical practitioners who were qualified to receive approved arsenobenzene compounds free of cost.

During 1929, 2,110 doses of these drugs were issued to medical practitioners. The number of Manchester patients treated by them was 185. The number discharged after a full course of treatment was 58 and the number under observation at the end of the year was 111.

1,894 Wassermann outfits and 413 microscopical outfits were issued, and Table IV. shows the pathological work done in connection with this part of the scheme.

PUBLICITY.

Posters giving the location of treatment centres, both for males and females, and the days and hours of the clinics, are displayed in all public conveniences. Booklets describing the nature and danger of venereal diseases are distributed on suitable occasions.

There is still a steady demand for lectures on general health topics, and 72 such lectures were given during the year under review. As far as possible experts in their various branches have been engaged and the audiences have always been appreciative.

FINANCE.

A statement prepared by the City Treasurer shows that the total ne expenditure on the scheme for the year 1929 was as follows:—

A.—*Apportionable Expenditure.*

	£	s.	d
Manchester University, Department of Pathology ..	441	7	
Ancoats Hospital	2,646	3	1
Manchester and Salford Hospital for Skin Diseases ..	1,222	9	
St. Luke's Hospital	3,834	3	
Manchester Royal Infirmary	2,965	9	
St. Mary's Hospital	1,126	17	
	£12,236	10	

B.—*Non-apportionable Expenditure.*

	£	s.	d
Treatment of Manchester patients by other Local Authorities	1,255	3	
Approved Arsenobenzene Compounds issued by the Medical Officer of Health	294	15	
Maternity and Child Welfare Centres	328	17	
Auxiliary Centre for Females	592	6	1
Publicity	35	1	1
Printing, Stationery, and Advertising	29	7	
Administration Expenses	474	11	
	£3,010	3	
Total expenditure for year ..	£15,246	13	

The total cost per attendance is 3s. 10·35d., an increase of approximatel 2d. on last year's figure of 3s. 8·34d. The increase is mainly due to the fa that the attendances have not increased to the extent anticipated, whilst th overhead charges are slightly higher than last year. In addition, th expenditure at St. Luke's Hospital shows an increase of £370, due to th fitting up of new cubicles and appliances in connection therewith.

Comparing the five hospitals, the highest cost per attendance is at Ancoat (4s. 1·07d.) and the lowest at the Hospital for Skin Diseases (3s. 7·08d.), difference of 5·99d.

No action under the Venereal Disease Act, 1917, has been taken durin the year.

EXTRACT FROM A REPORT ON THE WORK DONE AT THE VENEREAL DEPARTMENT OF THE CRUMPSALL HOSPITAL DURING THE YEAR ENDED DECEMBER 31ST, 1929.

The Medical Superintendent of the Crumpsall Hospital supplies the following figures :—

ADMISSIONS.

Total Admissions.

	Syphilis	Soft Chancre	Gonorrhœa
Males	128	..	145
Females	147	..	54
	275	..	199

Admission of Patients from other Unions (included in above figures).

	Syphilis	Soft Chancre	Gonorrhœa
Males	35	..	37
Females	35	..	19
	70	..	56

There were 37 births in this department of the Infirmary during the year.

Persons Treated with Approved Arsenobenzene Compounds.

	Manchester Union	Other Unions
Total number—Males	55	21
Females	65	20
	120	41

The total number of injections of approved arsenobenzene compounds was 888.

Pathological Examinations.

The number of Wassermann examinations carried out totalled 415 ; and examinations for detection of gonococci 390.

MANCHESTER AND SALFORD APPROVED CENTRES FOR THE TREATMENT OF VENEREAL DISEASES, 1929.

MANCHESTER ROYAL INFIRMARY, OXFORD ROAD, MANCHESTER	ANCOATS HOSPITAL, MILL STREET, ANCOATS, MANCHESTER	MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES, QUAY STREET, MANCHESTER	ST. LUKE'S HOSPITAL, DUKE STREET, LIVERPOOL ROAD, MANCHESTER
Skin Clinic— Thursday ...11 a.m. (females and children) Wednesday ...6 p.m. (males) *Genito-Urinary Clinic*— Wednesday ...11 a.m. (females and children) Thursday ...6 p.m. (males) *Skin and Genito-Urinary Clinic*— Monday... ...6 p.m. (males)	*Skin Diseases*— Wednesday ...11-30 a.m. (females) Wednesday and Saturday } 5-30 p.m. (males) *Genito-Urinary Diseases*— Wednesday ...12 noon (females) Wednesday and Saturday } 5-30 p.m. (males)	*Skin Clinic only*— Daily except Sunday— For men ...9 to 10 a.m. For women and children— 9-0 to 11-0 a.m.	Monday ... Tuesday ... Thursday ... Friday ... } 5 to 7 each evening (males and females) Wednesday...5 to 7 p.m. Friday ..11 to 1 p.m. } (females only) *Irrigation*— Monday, Tuesday, Thursday, and Friday ...9 a.m. to 5 p.m. Wednesday ...9 a.m. to 2 p.m. Saturday ...9 a.m. to 1 p.m. Sunday ...10 a.m. to 12 noon
ST. MARY'S HOSPITAL, WHITWORTH STREET	CHILD WELFARE CENTRES (Pre-maternity Clinics)	AUXILIARY CENTRE (Females), MONSALL HOSPITAL, NEWTON HEATH, MANCHESTER	SALFORD MUNICIPAL CLINIC, 155, REGENT ROAD, SALFORD
Females only— Monday ... Wednesday Thursday Friday ... } 9 to 10-30 a.m. Thursday ...5 to 7 p.m. Tuesdays ...Intermediate treatment by nurse, 7 to 8 p.m.	45, *Higher Ardwick*— Fridays ...9 to 11 a.m. 42, *Lower Moss Lane*— Thursdays...9 to 11 a.m.	Sunday ...10-30 a.m. to 12-30 p.m. Monday ...9-30 a.m. to 12 noon 4 to 8-30 p.m. Tuesday ...9-30 a.m. to 12-30 p.m. 2 to 5-30 p.m. Wednesday...9-30 a.m. to 12-30 p.m. 2 to 5-30 p.m. Thursday ...9-30 a.m. to 12-30 p.m. 2 to 5-30 p.m. Friday ...9-30 a.m. to 12 noon 4-30 to 8-30 p.m. Saturday ...9-30 a.m. to 1-30 p.m. The Centre is closed first Sunday in every month.	*All Venereal Diseases*— Daily, as follows, for both Sexes:— Monday to Friday inclusive, 8-30 a.m. to 8-30 p.m. Saturday...8-30 a.m. to 12-30 p.m. 7 to 8-30 p.m. Sunday ...9-30 a.m. to 12-30 p.m. 3-30 to 6-30 p.m.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Total	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1. Number of cases which— (*a*) at the beginning of the year under report were under treatment or observation for	1,283	942	18	..	1,657	315	49	159	3,007	1,416
(*b*) had been marked off *in a previous year* as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report *suffering from the same infection*	16	44	..	..	7	21	..	10	23	75
Total—Items 1 (*a*) and 1 (*b*)	1.299	986	18	..	1,664	336	49	169	3,030	1,491
2 (*a*). Number of cases dealt with at the Treatment Centre during the year *for the first time*	875	474	84	..	1,419	403	714	540	3,092	1,417
Total—Items 1 (*a*), 1 (*b*), and 2 (*a*)	2,174	1,460	102	..	3,083	739	763	709	6,122	2,908
2 (*b*). Number of cases *included* in Item 2 (*a*) known to have received *previous treatment at other Centres* for the same infection	35	17	..	..	44	10	..	2	79	29
3. Number of cases which ceased to attend— (*a*) Before completing the first course of treatment for	218	170	..	..	609	212	..	81	827	463
(*b*) After one or more courses, but before completion of treatment for	242	134	..	..	..	2	..	..	242	136
(*c*) After completion of treatment, but before final tests as to cure of	211	129	..	..	311	32	..	..	522	161
4. Number of cases transferred to other Treatment Centres after treatment for	118	74	..	..	171	54	..	6	289	134
5. Number of cases discharged after completion of treatment and observation for	182	76	81	..	418	115	710	467	1,391	658
6. Number of cases which, at the end of the year under report, were under treatment or observation for	1.203	877	21	..	1,574	324	53	155	2,851	1,356
Total—Items 3, 4, 5, and 6	2,174	1,460	102	..	3,083	739	763	709	6,122	2,908
7. Out-patient attendances— (*a*) For individual attention by the Medical Officer	20.540	12,336	295	..	15,777	5,666	1,617	2,359	38,229	20,361
(*b*) For intermediate treatment—*e.g.*, irrigation, dressings, etc...	876	77	2,122	..	20,623	5,979	..	247	23,621	6,303
Total attendances	21,416	12,413	2,417	..	36,400	11,645	1,617	2,606	61,850	26,664
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from	569	351	19	..	562	1,078	..	..	1,150	1,439

AUXILIARY CENTRE FOR FEMALES AT MONSALL HOSPITAL.

TABLE III.—SHOWING NUMBER OF PERSONS TREATED AT THE CENTRE DURING

PARTICULARS	Gonorrhœa	Syphilis and Gonorrhœa	Not V.D.	T
1. Number of females who on 1st January, 1929, were under treatment for	41	2	..	
2. Number of new patients who attended during the year for the first time—				
(*a*) Name of Clinic from which patient came—				
Ancoats Hospital	31	..	..	
Manchester Royal Infirmary	9	..	..	
Child Welfare Centres	4	..	..	
(*b*) Cases referred to the Centre by Medical Practitioners	12	..	..	
3. Old patients who have returned for treatment after discontinuing attendance for some time—				
(*a*) From Clinics—				
Ancoats Hospital	5	1	..	
Manchester Royal Infirmary	2	..	..	
St. Mary's Hospital	1	..	..	
Child Welfare Centres	2	..	..	
Cases referred by Medical Practitioners	2	..	..	
Total item 2 (new patients)	56	..	..	
Total items 1, 2, and 3—Total patients attending during 1929	109	3	..	1
4. Cases discharged cured :—				
(*a*) Ancoats Hospital	21	1	..	
Manchester Royal Infirmary	8	..	..	
Child Welfare Centres	3	..	..	
(*b*) Medical Practitioners' Cases	5	..	..	
Total item 4.—Cases discharged cured	37	1	..	
5. Discontinued attendance	34	1	..	
6. Transferred to other Clinics	..	..	..	
7. Number of patients still attending on Jan. 1st, 1930	38	1	..	

The number of new cases was 56, which compares with 71 in the previous and 61 in 1927. More than half the cases came from Ancoats Hospital.

The total number of attendances was 2,999, an average of 26·77 per case, there 30 patients who attended on more than 30 occasions. The patients continue to atte treatment much more regularly at this centre than they do at the other trea centres in the City.

201 Sitz baths were given during the year.

TABLE II.—SHOWING THE WORK DONE AT FIVE VENEREAL DISEASE CLINICS AND AT TWO CHILD WELFARE CENTRES DURING THE YEAR 1929.

PARTICULARS	MANCHESTER ROYAL INFIRMARY				ANCOATS HOSPITAL				HOSPITAL FOR SKIN DISEASES			
	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	*G.	Not V.D.
New Cases	415	2	544	92	375	..	297	530	223	..	69	104
Total cases treated	1,712	2	1,693	103	694	..	538	530	514	..	69	104
Cases discharged after completion of treatment	48	..	219	85	145	..	154	530	30	..	..	..
Cases ceasing to attend Clinic—												
(A) Before completing the first course of treatment	104	..	258	..	..	..	..	..	63	..	..	..
(B) After one or more courses, but before completion of treatment	195	..	..	..	70	..	91	..	94	..	..	..
(C) After completion of treatment, but before final tests as to cure	108	..	131	..	178	..	50	..	17	..	..	..
(X) Transferred to other Treatment Clinics	104	..	109	..	..	..	..	..	47	..	..	..
Attendances at the Out-patient Clinic	9,593	11	6,510	240	8,375	..	3,687	880	6,450	..	69	176
Intermediate treatment	..	..	..	..	..	..	..	..	..	..	..	..
In-patient Days—	63	..	..	..	..	..	..	..	46	..	..	..
Doses of approved arsenobenzene compounds given	2,274	..	..	..	2,736	..	..	..	923	..	..	..
Pathological Examinations made—	Wass.	Spir.	Gon.		Wass.	Spir.	Gon.		Wass.	Spir.	Gon.	
A. (Centre)	..	133	911	..	1,375	..	906	..	585	..	..	..
B. (Public Health Laboratory)	1,208	..	..	..	..	..	..	..	35	..	..	..

PARTICULARS	ST. LUKE'S HOSPITAL				ST. MARY'S HOSPITAL.				CHILD WELFARE CENTRE, HIGHER ARDWICK			
	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.
New Cases	255	82	735	234	52	..	114	174	21	..	2	79
Total cases treated	430	100	1,187	276	200	..	203	326	48	..	7	87
Cases discharged after completion of treatment	12	81	94	236	10	..	27	111	9	..	..	75
Cases ceasing to attend Clinic—												
(A) Before completing the first course of treatment	100	..	395	..	45	..	39	81	3	..	2	..
(B) After one or more courses, but before completion of treatment	82	..	..	..	..	..	..	..	3	..	2	..
(C) After completion of treatment, but before final tests as to cure	35	..	162	..	..	..	..	..	..	..	..	..
(X) Transferred to other Treatment Clinics	20	..	33	..	12	..	9	6	5	..	2	..
Attendances at the Out-patient Clinic	5,706	284	9,510	670	2,011	..	1,517	1,535	406	..	27	278
Intermediate treatment	876	2,122	23,406	..	..	..	274	247	..	..	..	..
In-patient Days—	821	19	1,640	..	..	..	..	..	..	..	..	..
Doses of approved arsenobenzene compounds given	2,250	..	..	..	1,512	..	..	..	285	..	..	..
Pathological Examinations made—	Wass.	Spir.	Gon.	Other organisms	Wass.	Spir.	Gon.	Other organisms	Wass.	Spir.	Gon.	
A. (Centre)	..	48	2,513	..	..	..	832	..	..	..	..	..
B. (Public Health Laboratory)	900	..	..	1	221	..	..	1	88	..	64	..

PARTICULARS	CHILD WELFARE CENTRE, LOWER MOSS LANE				TOTALS FOR THE YEAR				GRAND TOTALS—ALL AREAS (Compared with corresponding figures for 1928)					
	Sy.	S.C.	G.	Not V.D.	Sy.	S.C.	G.	Not V.D.	1929			1928		
New Cases	8	..	5	41	1,349	84	1,766	1,254	4,453			4,591		
Total cases treated	33	..	16	46	3,631	102	3,713	1,472	8,918			9,306		
Cases discharged after completion of treatment	3	..	2	36	257	81	496	1,073	1,907			2,035		
Cases ceasing to attend Clinic—														
(A) Before completing the first course of treatment	2	..	2	..	317	..	696	81	1,094	2,670		1,236	2,892	
(B) After one or more courses, but before completion of treatment	2	..	..	..	446	..	93	..	539			603		
(C) After completion of treatment, but before final tests as to cure	2	..	..	..	340	..	343	..	683			642		
(X) Transferred to other Treatment Clinics	4	..	3	..	192	..	156	6	354			411		
Attendances at the Out-patient Clinic	335	..	123	197	32,876	295	21,443	3,976	58,590	85,515		58,620	82,552	
Intermediate treatment	..	..	..	..	876	2,122	23,680	247	26,925			23,932		
In-patient Days—	..	..	..	..	930	19	1,640	..	2,589			2,695		
Doses of approved arsenobenzene compounds given	170	..	..	..	10,150	..	..	..	10,150			10,136		
Pathological Examinations made—	Wass.	Spir.	Gon.		Wass.	Spir.	Gon.	Other organisms	Wass.	Spir.	Gon.	Wass.	Spir.	Gon.
A. (Centre)	..	..	..	..	1,960	181	5,162	..	1,960	181	5,162	2,042	157	4,450
B. (Public Health Laboratory)	42	..	56	..	2,494	..	120	2	2,494	..	120	2,562	..	111
									4,454	181	5,282	4,604	157	4,561

* Gonorrhœa Cases transferred to Other Centres.

Venereal Diseases—Pathological Work done during 1929.

	Wassermann Reaction					Gonococci					Spirochætes				
	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined	Positive	Negative	Doubtful	Unsatisfactory Specimens	Total Examined
A. Work done at the Public Health Laboratory (University Bacteriological Department) :															
Medical Practitioners	254	601	51	*2*	906	58	226	..	*2*	284	1	6	..	*1*	7
Institutions other than Approved Centres	184	799	25	*12*	1,008	10	40	..	..	50	..	..	..	..	..
St. Luke's Hospital	203	657	42	*1*	902	..	..	..	..	..	..	..	..	..	..
St. Mary's Hospital..	64	150	9	*1*	223	..	..	..	..	..	..	1	..	..	1
Manchester Royal Infirmary	500	637	72	*2*	1,209	..	..	..	..	..	..	..	..	..	..
Two Maternity and Child Welfare Centres	29	94	4	*3*	127	5	161	..	..	166	..	..	..	..	..
Total work done at Public Health Laboratory	1,234	2,938	203	*21*	4,375	73	427	..	*2*	500	1	7	..	*1*	8
B. Work done by Hospital Pathologist :—															
Ancoats Hospital		Not	stated		1,375		Not	stated		906		Not	stated		..
Manchester and Salford Hospital for Skin Diseases		Not	stated		585	..	..	..	..	..		Not	stated		..
C. Work done by Clinical Pathologist at Clinics :—															
Manchester Royal Infirmary..	..	..	..	..	..		Not	stated		911		Not	stated		133
St. Mary's Hospital	..	..	..	..	..		Not	stated		832	..	..	..	..	..
St. Luke's Hospital	..	..	..	..	..		Not	stated		2,513		Not	stated		48
Total of A, B, and C	..	..	..	..	6,335	..	..	..	..	5,162	..	..	..	..	189

TABLE V.

Name of Hospital	MANCHESTER ROYAL INFIRMARY		ANCOATS HOSPITAL		SKIN HOSPITAL		ST. LUKE'S HOSPITAL		ST. MARY'S HOSPITAL		TOTALS	
Number of letters sent ..	1177		161		163		141		454		2,096	
Results :—		%		%		%		%		%		%
(1) No reply	529	44·9	85	52·7	62	38·0	83	58·9	263	57·9	1,022	48·8
(2) Wrong addresses (letter returned)	..	..	30	18·6	8	4·9	16	11·4	39	8·6	93	4·4
(3) Replied "under own doctor"	54	4·6	6	3·7	8	4·9	2	1·4	3	0·7	73	3·5
(4) Replied "other causes for absence"	49	4·2	2	1·2	9	5·5	7	5·0	33	7·3	100	4·8
(5) Returned and still attending	318	27·0	8	5·0	49	30·1	8	5·7	41	9·0	424	20·2
(6) Returned for a period only..	76	6·5	8	5·0	16	9·9	20	14·0	57	12·6	177	8·4
(7) Returned and then transferred to other Centres	90	7·6	4	2·5	..	..	1	0·7	1	0·2	96	4·6
(8) Returned and discharged as cured	61	5·2	18	11·1	11	6·7	4	2·8	17	3·8	111	5·3
	1,177		161		163		141		454		2,096	

REPORT OF WORK DONE UNDER THE RATS AND MICE (DESTRUCTION) ACT, 1919.

The provisions of the Act, which have been in force since January 1st, 1920, require occupiers of premises not only to destroy rats, but also to take such steps as may from time to time be necessary and reasonably practicable for the prevention of rat infestation on land or buildings occupied by them.

The principal feature of the year's work has been the large increase in the number of examinations of undermined surfaces. The subsequent tracing of rat burrows in this connection is of special importance, insomuch that in the majority of cases it leads to the local source of an infestation, usually a disused or defective drain or sewer.

Special measures have been carried out to control the movement of rats in connection with the clearing of the large area comprising the Town Hall Extension site. Unusual conditions have prevailed. The demolition of a large number of old buildings, the uncovering of disused drains, the removal of street sewers, and the diversion of the River Tib culvert have all contributed to the presence of rats on the site. The steps taken have included the systematic laying of poison baits and the employment of an experienced rat catcher. The City Engineer and the City Surveyor have co-operated in this work and every step has been taken to reduce to a minimum the danger of adjacent property becoming rat infested from this source.

The Rat Section has been represented at two "Health Exhibitions" held in the early part of the year. Exhibits of clothing, foodstuffs, and materials damaged by rats, types of traps and apparatus, selected poison baits, and rat-proofing materials were shown. The public showed great interest in these stands, and much useful propaganda work was effected.

Investigation.

Complaints of the presence of rats or mice received from occupiers, sanitary inspectors, health visitors, police, and the general public are investigated by the rat officers.

The premises in question and, if necessary, the adjacent property, are inspected to ascertain the extent of, and if possible, the source of the infestation. Primary inspections have been made at 3,075 premises during the year, and of these 2,713 were found to be infested. Of the rat infested premises examined, 28 per cent. showed infestation of the interior of the building and 72 per cent. showed infestation of yards, passages, and land only.

The conditions found at each type of premises visited are shown in Table I.

Causes of Infestation in Premises Visited during the Year.

The infestation was found to be directly due to, or associated with, defective or disused drains or sewers in 77 per cent. of all rat-infested premises visited; in 46 per cent. of premises affected by interior infestation ; and in 84 per cent. of premises where the infestation was confined to yards and passages only. In the remainder of the premises visited it was found that the infestation was due to other causes, *e.g.*, deposits of refuse, improper storage of food and waste materials, the nature of the business carried on, and to the dilapidation of premises, etc.

A classification of the causes of infestation will be found in Table II.

Nature of Business carried on at Infested Premises.

During the year primary inspections were made at 805 business premises affected by rat infestation, an increase of 20 per cent. over the previous year. Of this number, 208, or 25 per cent., were premises at which food was prepared, stored, or sold, and 448, or 55 per cent., were factories, workshops, warehouses, and places in which the attraction to rats was the scrap food and food paper wrappings left unprotected about the premises.

Details of the nature of premises infested during the year will be found in Table III.

REPRESSIVE MEASURES.

The occupiers of rat-infested premises are advised by the rat officers of the remedial and preventive measures which appear to be necessary. The steps to be taken may include :—

(*a*) Destruction of rats.

(*b*) Examination of floor spaces or paved surfaces and the tracing of burrows.

(*c*) Elimination of harbouring places.

(*d*) Removal of accumulations of refuse.

(*e*) Protection of food stocks and scrap food.

(*f*) Rat proofing of the premises.

(*g*) Arrangements for concerted action in adjacent premises.

The best methods of carrying out organised rat destruction are suggested, and repeated revisits are made where necessary to ensure that the measures being carried out are sufficient and continued.

An outline of suggested action is sent to the owner where small dwelling-house property is affected.

Destruction.

Occupiers are encouraged to carry out the trapping of rats themselves, but in premises where occupiers cannot carry out destruction measures effectively, or when the premises are badly infested, the employment of a reliable rat catcher is suggested. In all such cases it is advised that the rat catcher should work in conjunction with a contractor who can carry out the rat proofing of the premises effectively. In necessitous cases traps are loaned to occupiers of dwelling-houses.

Professional rat catchers have been employed at 278 premises and the gassing machines have been used twice during the year.

It is not possible to estimate the total number of rats destroyed in the City as a consequence of official action. Three professional rat catchers have certified to the destruction by them of 8,496 rats during the year in the City area.

The rat officers have made 2,362 revisits during the progress of repressive measures, and this number shows an increase of 23 per cent. over that of the previous year.

At the end of the year work was in progress by owners and occupiers at 536 premises and by rat catchers at 97 premises, making a total of 633 premises.

The various departments of the Corporation have carried out the destruction of rats and mice on lands, buildings, and sewers under their control as follows:—

Poison and Virus—	Baits laid	57,257
	Baits taken	40,579
Rats killed by other means		2,188
Mice destroyed		283

Rat catchers have been employed on fourteen Corporation properties.

The poison baits have been mainly laid in the sewers by the City Engineer's Department; the result of such measure can only be judged by the report of the Rivers Department that "a large number of dead rats continue to reach the works by way of the sewage, particularly following heavy flows."

Ratting cats and dogs have done useful work at the several sewage works and estates.

The Director of Public Cleansing reports that most of the Depots are entirely free from rats. At the other depots baiting and trapping has been carried out.

Markets and Parks, etc.—Organised rat repression is carried out at all branches of these departments.

Other Corporation departments have carried out measures for the destruction of rats and mice when found necessary.

Rat Proofing.

The condition of the structures of many of the older buildings in the City provides an easy means of passage and of harbourage for rats. The attention of the occupier is directed to visible defects, such as short or gnawed doors, open pipe tracks, unguarded windows or ventilators, and to holes in the structure. Occupiers are usually willing to have these minor defects remedied, but this work may only effect a partial rat proofing. Cases frequently arise where rat runs are concealed in floor and roof spaces, flues, cavity walls, and in recesses difficult of access. In many of these premises rat proofing can only be effected at considerable cost. Such cases present difficulty, as under the Act it is not obligatory upon the owners of occupied premises to take action, and the occupier can only be required to take " reasonably practicable steps."

Where small dwelling-house property has become rat infested it is the practice to request the co-operation of the owners, who are usually willing to carry out the suggestions of the department.

Repressive measures have been carried out in connection with 2,202 premises. This number shows an increase of 31 per cent. over that of the previous year. Particulars of the measures carried out during the year are detailed in Table IV.

Recurrence of Rat Infestation.

In the period 1924 to 1928 inclusive, measures for the repression of rats have been carried out in connection with 5,084 premises. At 4,651 premises (91 per cent.) there has been no complaint of reinfestation. Subsequent infestations, due to a number of causes, have occurred in connection with 433 premises during the five years' period mentioned. Of the 433 premises reinfested, 269 have been dealt with subsequently and again reported clear of rats, and at 164 reinfested premises repressive measures are still in hand.

The efficiency at the end of the year 1929 of the work done in each year during the period 1924-1928 is set out in Table V.

General Preventive Measures.

Close attention has again been paid to preventive work, and much of the rat officers' time is occupied in impressing on occupiers the necessity of the protection of foodstuffs, the removal of lumber and rubbish, and of the proper storage and disposal of scrap food, food paper wrappings, organic refuse, and other materials attractive to rats.

Concerted Action.

The importance of occupiers of adjacent premises co-operating in the work of rat repression has been emphasised, and in all cases it has been sought as far as possible to secure collective action for the destruction of rats and mice.

Tracing of Rat Burrows in relation to Drainage Infestation.

There have been 259 examinations of burrowed surfaces made during the year. This number shows an increase of 43 per cent. ovei that of the previous year.

At the request of the Rat Executive Officer the City Engineer's Department have made 180 examinations of undermined portions of streets and through passages; owners and occupiers have made 61 examinations of undermining in premises, cellars, yards, private passages, and gardens. The Drainage or Sanitary Sections have made 18 examinations in cul-de-sac passages. These examinations have revealed the existence of 418 drain or sewer defects which were allowing the egress of rats.

In other cases where drainage infestation has been suspected the Sanitary Section has been requested to furnish a report with a view to a systematic examination of the drains being made under the Public Health Acts.

The conditions found and the action taken in connection with the tracing of rat burrows will be found in Table VI.

In no case was it found necessary either to serve Statutory Notices or to take legal proceedings.

NATIONAL RAT WEEK, 1929.

In compliance with a memorandum from the Ministry of Agriculture and Fisheries, a special effort was made during Rat Week, November 4th to 9th, 1929.

Propaganda during Rat Week.

The object was advertised as extensively as possible through the medium of the Press, two hundred 50in. by 40in. posters, and 1,200 circular letters. All Corporation Departments were invited to co-operate.

Rat Week—Comparative Statement.

Work directly arising from Rat Week Propaganda			Weekly Average during the Year (excluding Rat Week)
Number of complaints received		44	8
Primary visits in Rat Week	169		
Primary visits subsequent to Rat Week ..	192	361	55
Revisits to other premises known to be infested		92	48

In addition to the above, 7 complaints of premises outside the City area were referred to the Local Authority concerned.

Conditions Found.

	Business Premises	Dwelling-houses	Totals
Interior infestation	80	32	112
Exterior infestation	41	102	143
Mice only	3	80	83
No evidence	15	8	23
	139	222	361

Advice was given in all cases by letter or verbally by the Visiting Officer. Arrangements were made at 18 premises for the employment of a rat catcher.

Five rat catchers reported having destroyed 617 rodents during Rat Week.

Repression Work by Corporation Departments during Rat Week.

The City Engineer, the Rivers, Markets, Cleansing, and Parks, etc., Departments carried out special measures.

Poison baits laid in sewers	6,998
Poison baits known to have been taken	3,648

Response by the Public.

The extent and result of private action cannot be estimated, as there are no means of ascertaining the measures taken by the general public in cases not brought to the notice of the Department. At 238 other premises known to be rat infested and revisited during the period October 28th to November 9th the occupiers were reported to be making energetic efforts in the work of rat repression.

TABLE I.

SUMMARY OF CONDITIONS REPORTED AND NUMBER OF PREMISES PRIMARILY VISITED DURING THE YEAR 1929.

Interior Infestation			Exterior Infestation		No evidence of Infestation	
Business Premises	Dwelling-houses	Mice only	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses
384	318	214	421	1,376	125	237
916			1,797		362	

Total .. 3,075

TABLE II.

CLASSIFICATION OF CAUSES OF INFESTATION IN PREMISES VISITED, 1929.

Cause of Infestation	Interior Infestation		Exterior Infestation		Totals	Per-centage
	Business Premises	Dwelling-houses	Business Premises	Dwelling-houses		
ly due to, or associated with, ctive or disused drains or ers	111	217	294	1,314	1,936	77·46
e of business carried on in nises or vicinity	114	13	50	8	185	7·40
y of open or culverted water- ses	59	8	20	35	122	4·88
t in protection of food scraps rappings	76	1	35	—	112	4·50
ition or building operations icinity	8	39	15	7	69	2·76
nd refuse dumps	1	11	5	2	19	·76
lated premises	8	5	—	—	13	·52
not determined	7	24	2	10	43	1·72
Totals	384	318	421	1,376	2,499	100·00

TABLE III.

NATURE OF PREMISES INFESTED DURING THE YEAR 1929.

Particulars of Premises	Type of Infestation			
	Interior		Yards Passages, or Adjoining Lands only	Totals
	Rats	Mice	Rats	
Residential hotels, restaurants, cafes, cook shops	10	1	3	14
Butchers, greengrocers, fish and poultry dealers, grocers, bakers, confectioners, tripe shops, fried fish shops, sweets shops, ice cream makers, and licensed premises	50	18	126	194
Provision warehouses, fruit, spice, nuts, hay, and corn warehouses	11	1	3	15
Piggeries, sausage, etc., makers, breweries, glue and gum works	5	—	—	5
Tips, rag and bone stores, stables, poultry keepers, kennels, and watercourses ..	15	1	11	27
Farms, parks, allotments, land, and brickworks	3	—	15	18
New building estates, builders' stores, and garages	21	—	47	68
Factories and Workshops.—Stationery, clothing, piece goods, laundry, furniture, timber, joiners and builders, printers, umbrella, engineering, smallwares, leather, toffee, soap and perfume, hardware, upholstery, cloth, and miscellaneous	102	5	64	171
Warehouses.—Clothing, piece goods, makers up, packers, paper, hardware, fancy goods, leather, glass, furniture, smallwares, furriers, fents, and miscellaneous	60	3	36	99
Shops.—Drapers, milliners, chemists, boots, stationery, newsagents, fancy goods, hairdressers, tobacconists, herbalists, hardware, costumiers, tailors, outfitters, furniture, and miscellaneous	55	10	63	128
Institutions.—Hospitals, colleges, schools, nursing homes, club houses, hostels, and clinics	8	3	5	16
Public halls.—Cinemas, libraries, and town hall	3	—	3	6
Offices	35	5	32	72
Unoccupied premises	6	1	13	20
Dwelling-houses	318	166	1,376	1,860
Totals	702	214	1,797	2,713

TABLE IV.

RAT DESTRUCTION AND PREVENTIVE MEASURES CARRIED OUT DURING THE YEAR 1929.

Measures carried out	By whom carried out	Business Premises	Dwelling-houses	Totals
Destruction only	Occupier	51	39	90
	Owner	—	—	—
	Rat catcher	10	—	10
Destruction, Proofing, and Prevention	Occupier	123	108	231
	Owner	2	—	2
	Rat catcher	18	3	21
	Destruction by occupier. Proofing by owner	53	152	205
	Destruction by rat catcher. Proofing by occupier	61	4	65
	Destruction by rat catcher. Proofing by owner	54	31	85
	Destruction by occupier. Sewers by City Engineer	145	1,101	1,246
	Destruction by occupier. Drains by owner	34	213	247
	Totals ..	551	1,651	2,202

TABLE V.

PERCENTAGE EFFICIENCY AT THE END OF THE YEAR 1929 OF THE WORK DONE IN EACH YEAR DURING THE PERIOD 1924 TO 1928.

Particulars	Year				
	1924	1925	1926	1927	1928
Premises at which measures were taken ..	506	793	786	1,329	1,670
Premises where reinfestation has occurred and been dealt with subsequently. Again reported clear of rats	85	52	46	33	53
Reinfested premises at which repressive measures are still in hand	17	59	23	46	19
Premises dealt with, at which there has been no further complaint of the presence of rats	489	734	763	1,283	1,651
Precentage of efficiency of the work done at the end of the year 1929	96.64	92.56	97.07	96.53	98.86

TABLE VI.

TRACING OF RAT BURROWS IN RELATION TO DRAINAGE INFESTATION.

Number of examinations made by ..	*City Engineer* 180	*Owners and Occupiers* 61	*Drainage Section* 16	*Sanitary Section* 2
Conditions found or action taken				
Defective sewers requiring reconstruction..	7	..	3	..
Sewers reconstructed	7	..	3	..
Minor defects in sewers repaired	112	..	2	..
Disused privy midden drains removed ..	75	1	10	..
Other disused drains removed, dealt with, or referred to Drainage Section	48	30	2	..
Outlet drains repaired	39	..	..	..
Defective drains remedied by owners or referred to Sanitary Section	17	18	..	37
Street drain inlets repaired	17	..	..	..
Outward rat burrows consolidated	26	13	..	2
Surface rat burrows consolidated	36	35	1	..
Undermining due to other causes than rats	5	1	..	..

OTHER DRAINAGE EXAMINATIONS BY SANITARY SECTION MADE DURING THE YEAR AT THE INSTANCE OF THE RAT EXECUTIVE SECTION.

Premises examined in consequence of suspected drainage infestation	50
Premises awaiting examination of drains in consequence of suspected infestation	39
Premises at which drainage work required under notice has been completed during the year	126
Premises at which drainage work required by notice was in progress at the end of the year	22
Notices to repair defective drains served or in course of preparation	22

TUBERCULOSIS.

By Dr. D. P. Sutherland, Senior Tuberculosis Officer.

The year 1929 was characterised by an increase in the death-rate from all causes, and the mortality from pulmonary tuberculosis was a part of this increase. The notification rate for all forms of tuberculosis (pulmonary and other) was reduced.

Prior to this for three or four years the death-rate had been falling, and the notification rate had also been decreasing, though fluctuating a little. A falling death-rate has been pointed out before (*e.g.*, in the Annual Report for 1923-24, page 91) to be liable to be followed by a rise when the balance between survivors and new infections has been passed, and this phase has again recurred.

In view of past experience we may expect slight fluctuations in the notification rate, and following the declining tendency of the past few years, in association with this year's increased mortality, it is not unlikely that an increase is about due, or at any rate a diminution in the percentage of fall.

That this is not already with us under existing economic and housing difficulties is a gratifying feature.

Before going into further detailed analysis of the figures, I would once more draw attention to the completeness of notification in this area. The percentage of cases not notified before death is now only 2·6 per cent., and is a practical and striking testimony to the effectiveness of the observance of notification by the medical profession in Manchester.

The notification of pulmonary tuberculosis is generally down, but the figures for the following age groups show an increase :—

1. Males, ages 15 to 24—17 per cent. increase.
2. Females, ages 20 to 54 (with the exception of 25 to 34 age group, where there is a slight diminution of 3 per cent), show an increase of 8 per cent.

The total diminution in the notification figures for pulmonary tuberculosis is 3·6 per cent., as compared with the previous year.

The 1927, 1928, and 1929 figures all emphasise the increased notification amongst males at early ages, which is continuing. In the same three years there has been a tendency to an increase in the female notifications in a longer age series, namely, 20 to 54—with, however, the notable exception of 25 to 34—but in 1928 at this decade there was a marked increase in notification following an abnormal drop in 1927. This 1928 rise over compensated the normal curve, and is in course of being corrected in 1929. This is made manifest by the slight drop in notification in this age-period.

The otherwise raised rate which is present from ages 20 to 54 is uninterrupted except for this 3 per cent. decrease.

In regard to non-pulmonary tuberculosis a decrease in notification is seen in males and females, the female decline being the greater; but in 1928 the total males notified amounted to 214, this figure showing a reduction of 63 from the previous year's total of 277. For the year under review the total notified male cases were 204, a reduction of 10 from the year 1928.

The females in 1928 showed an increase of 50 over the 1927 total of 226, and this year they show a decline of 105 from the 1928 total of 276. Allowing for the abnormal rise in 1928, the fall in the female notification rate is not so far in excess of the male rate as would appear from one year's figures. It is, however, sufficiently marked to be noteworthy.

The decline in the male notifications presents no special feature, in so far as age-grouping is concerned, and its amount is small.

Amongst females the declines occur after one year of age, and are found in each decade to age 54. In detail these declines are most marked in the cervical glands series, and amongst the males this reduction equals about 30 per cent. and in females about 54 per cent. The age-groups affected are those given above.

Another marked reduction is in the notification of females suffering from tuberculosis of the abdomen, where a decrease is noted, more especially up to the age of 14 years.

Coming now to mortality, the death-rate increase is due entirely to cases of pulmonary tuberculosis, and is practically equally divided amongst the men and women. The increase is a material one, being ·11 per 1,000, *i.e.*, from 1·10 to 1·21.

The male increase is from 1·42 to 1·54, and the female increase from ·80 to ·91.

The general death-rate increase is 2·41 per 1,000, and all respiratory diseases (excluding phthisis) show an increase of ·83 per 1,000.

The features mentioned above are in accordance with past experience, namely, that when the general mortality-rate increases the tuberculosis death-rate also rises.

An analysis of the death-rates for males shows a rise in mortality from 15 to 19 years of age, and the next rise is from 35 to 44, but this is of less extent.

A more marked feature is the increase in deaths after 55 years of age, where the greatest relative mortality occurs.

In the general death-rate the steepest part of the upward curve commences at the 45 age group, *i.e.*, ten years earlier, and continues very high from that onward amongst males.

In females the rise is much less, and its steepest curve commences after the age of 55.

The explanation of this increase is, no doubt, the extremely severe spell of cold weather during the early part of 1929. The effect of this is reflected in the general death-rate.

From the latter end of January, 1929, to April, 1929, the number of deaths from all causes rose from its figure of 2,259 in 1928 to 4,196 in 1929. The number of these deaths due to respiratory diseases (other than phthisis) were respectively 466 and 1,191. During the same months the deaths from tuberculosis rose from 198 (the figure for the same period in 1928) to 245 in 1929.

The female mortality-rate does not show this marked increase after age 55, but continues the feature of an increased death-rate spread over the years 15 to 55, and is almost equal in each decennial period.

The deaths amongst men from all respiratory diseases increased in 1929 by about 50 per cent., whilst the increase amongst women was about 38 per cent. This difference may be due to the greater protection which home life secures to the women.

In view of these facts we need not assume any marked swing in the death-rate apart from that already anticipated and conditioned by the balance of resistance and infection. The coincidence of an expected rise with unfavourable external conditions, namely, those due to severe weather, fully accounts for the peak to the curve.

The new buildings at Abergele for the increased accommodation for children are nearing completion, and it is hoped by the time the next annual report is presented that these beds will be available for the reception of patients.

In last year's annual report reference was made to the artificial light treatment of cases of tuberculosis carried out both in institutions and at out-patient departments in the City. The experience recorded there has been continued, and the results do not show any change from those already found to have been wrought by this particular remedy.

A recent investigation into the results of artificial pneumothorax treatment has been carried out, and the following is a general review of the subject as it has been dealt with by us in Manchester.

We started artificial pneumothorax treatment first of all in 1913, when the operation was commenced upon suitable cases in the Abergele Sanatorium, at that time under the Medical Superintendentship of Dr. Craig. These cases, after the original induction, were then discharged, and a continuation of the treatment was carried out by us at the Dispensary here.

In these earlier cases somewhat elaborate preparations were made for the induction. The work was all new, and largely experimental in character. It was customary, for instance, to give a dose of morphia ($\frac{1}{6}$ grain) some half-hour before the operation was commenced; local anæsthesia was performed very carefully; and in some of the earlier cases a preliminary incision through the skin and superficial fascia was made with a scalpel before the introduction of the artificial pneumothorax needle. In continental practice an open incision down to the pleura was often made, and the parietal pleura then punctured.

The apparatus used here was always of a simple character, consisting of a modified Carl Woodcock machine, with which it was not possible to obtain any high pressure of gas, and where it was quite easy to see the state of intra-pleural pressure at all stages, whether connected or not connected to the pressure bottle. A good deal of time was also taken up in preparing freshly the necessary pyro-gallic acid and soda solution, to extract the oxygen and CO_2 from the air so that nitrogen could be introduced.

It was obvious, of course, that some of these measures were unnecessary; and the substitution of ordinary filtered air in place of nitrogen, and the simpler methods associated with improvements in artificial pneumothorax needles, made the whole operation much easier of accomplishment, and more comfortable for the patient and the physician.

From the beginning it was never regarded as a panacea here, and it has only been used in a limited number of cases. It has not, for instance, been considered desirable to induce an artificial pneumothorax upon any and every case that presented a unilateral lesion, but only where the indications for such operative measures appeared to be favourable. Rather has it been the custom for patients to be given the benefit of a trial under sanatorium conditions first, and in the majority of cases with beneficial results. Only in a case where sanatorium treatment has been found to be a failure—the patient not improving, or perhaps retrogressing—has it been considered that artificial pneumothorax should be resorted to.

There have, of course, been other indications for artificial pneumothorax, and in later years it has been done for other complications of tuberculosis, *e.g.*, hæmoptysis, as a replacement after aspiration of pleural fluid, and in one or two instances for extreme degrees of bronchiectasis.

In 1920 I had treated, by means of artificial pneumothorax, 21 cases out of a total of 27 where the operation had been attempted. In six of these, however, it was not possible to establish a collapse. At that time these cases were specially reviewed and reported upon to the Medical Research Council.

The patients had previously had trials of other forms of treatment under which they had ceased to improve, or had definitely deteriorated, except in three instances, in all of which, however, tubercle bacilli continued to be present in the sputum.

With a view to attempting to eliminate this particular source of infectivity, and also to still further improve a condition which was not thoroughly stable, artificial pneumothorax was commenced upon all these cases. As a result the working capacity was restored to either full or fair in all but two cases, and tubercle bacilli, which had been present in 17 out of the 21 cases, were only found in 4 subsequent to the artificial pneumothorax treatment.

Four years later these cases were again reviewed, together with another 11 cases which had been done in the meantime. It was then found that of the total of 32 cases to that date, 14 cases had died, some, it is true, from diseases other than tuberculosis, but the majority of them had died from that complaint, either in the lung, from tuberculous meningitis, tuberculosis of the genito-urinary or other system.

Up to the present we have had approximately 112 completed cases of artificial pneumothorax, 170 to 200 where complete pneumothorax was not possible of attainment, and something like another 100 cases where (although artificial pneumothorax appeared to be desirable) the patients or the parents refused to have it done.

Of these total cases the treatment had to be discontinued, after a longer or shorter period of treatment, in 48 instances, owing to extension of disease or to the gradual re-expansion and adhesion of the lung. In about 12 cases treatment was discontinued owing to the objection of the patient to it, or to their failure to continue the refills, and in five cases the occurrence of spontaneous pneumothorax interfered with the subsequent inductions.

Amongst all the cases done pleural effusion occurred in 26 cases. In some of these it was not necessary to withdraw the fluid. In others this was done and air introduced in its place.

We have not had many complications during the course of induction of artificial pneumothorax, and in my own experience there have been two cases of pleural shock which were somewhat alarming at the time, and the reason for which was not at all clear. In both these cases it occurred in patients who had had several refills extending over months, and there was nothing so far as could be observed in the refill which caused the particular symptoms complained of to distinguish it from any other. These two cases suddenly complained of pain in the neck and side, in one case radiating down the arm, and the other referred to the lower chest wall. The patients became pallid, clammy, pulseless, and collapsed. Induction was suspended for the time, restoratives and warmth applied, and in both instances the patient happily recovered within an hour or so.

Spontaneous pneumothorax has occurred in five cases at the Baguley Sanatorium, where the type of case is generally more advanced than that in other sanatoria. There was no special reason to be assigned for this complication, and in only one of the five cases did it occur after the first induction. All the others were during the course of refills, or after refills.

Dr. Trayer tells me that amongst his cases in the Sanatorium he has noted hydro-pericardium in one case, gangrene of the lung in one, and marked surgical emphysema in one case. A localised surgical emphysema, he tells me, was found to be frequent. I have not personally found a large number of cases with this particular complication, except to a very limited degree.

Taking all the cases over a long period of years, we find in Manchester, at any rate, that the cases appearing to be suitable for artificial pneumothorax amount to something between 2·5 and 4 per cent. of all the institutional cases that we get. This, of course, is including all the advanced cases as well as the more early ones, and it seems to be a fairly constant figure.

My impressions, based upon the cases we have had, are that in the limited number of cases mentioned artificial pneumothorax plays a valuable part in the treatment of pulmonary tuberculosis. It frequently restores the working capacity of patients to a degree not achieved in the absence of this measure. It limits the necessity in these cases also for prolonged institutional care, and it reduces the infectivity by diminishing and frequently abolishing the sputum and tubercle bacilli. Useful life is therefore prolonged, and although a large number of the cases ultimately die of their disease, a number are, I think, saved who would otherwise not have been able to survive.

It has not been possible for me to take out all the statistics of the whole of the cases here, but from a detailed analysis of those done up to six years ago the final up-to-date results show a mortality of 50 per cent. There is no reason to suppose that somewhat similar proportions would not exist when a sufficient length of time had elapsed in regard to the remaining cases.

As practically all these were deteriorating cases the results appear reasonably good and any comparison instituted should take account of this selection.

Figures are notoriously subject to misinterpretation and the few figures here given should not be taken too seriously. They do, however, represent characteristic and typical cases and, therefore, should not vary materially in the conclusions to be drawn from them from any larger series.

It is, therefore, of interest to note that in the review of the 600 cases, carefully tabulated by the Matson Bros., they found 45 per cent. to be dead after periods varying from about 9 to 2 years after artificial pneumothorax had been induced. This time period is shorter than the one I have taken, which is from approximately 15 to 6 years after artificial pneumothorax was completed.

In accordance with the requirements of the Ministry of Health it is to be noted that there have not been any cases of compensation under the Public Health (Prevention of Tuberculosis) Regulations, 1925, No. 757, during the year, nor has it been necessary to exercise the powers under Section 62 of the Public Health Act, 1925, for the compulsory removal or detention of patients.

The Department's work is seen in detail in the following pages, where various statistical tables for the year are presented :—

COMPARATIVE FIGURES.

Rates per Thousand of the Population.

	1926	1927	1928	1929
Death Rates :—				
General	13·17	13·77	12·93	15·34
All respiratory diseases (except tuberculosis)	2·61	2·93	2·42	3·25
Tuberculosis, all forms	1·41	1·38	1·29	1·4
Phthisis, both sexes	1·19	1·15	1·10	1·21
,, males only	1·58	1·41	1·42	1·54
,, females only	·84	·92	·80	·91
Non-pulmonary tuberculosis, both sexes ..	·22	·22	·19	·19
Tuberculosis Notification Rates :—				
All forms	2·44	2·53	2·51	2·28
Pulmonary only	1·84	1·88	1·87	1·79
Non-pulmonary only	·60	·65	·64	·48

TABLE X.—NEW CASES AND MORTALITY DURING 1929.

Age Periods	New Cases				Deaths			
	Pulmonary		Non-Pulmonary		Pulmonary		Non-Pulmona	
	M.	F.	M.	F.	M.	F.	M.	F.
0	1	—	5	6	—	1	5	8
1	11	7	40	25	5	2	22	9
5	20	18	43	35	1	2	9	8
10	11	32	18	22	—	7	3	7
15	69	77	33	22	29	47	10	8
20	75	116	12	16	43	74	9	8
25	142	152	22	22	87	92	9	7
35	157	97	14	13	129	61	6	4
45	173	62	10	3	139	52	2	1
55	109	26	4	5	97	24	5	6
65 and upwards	20	10	3	2	29	9	5	1
Totals ..	788	597	204	171	559	371	85	67

The number of non-notified deaths from pulmonary tuberculosis was 25 = 2·6 per cent.

The number of non-notified deaths from non-pulmonary tuberculosis was 46 = 30 per cent.

The percentage of non-notified deaths from all forms of tuberculosis was 6·6.

There were, in addition, 10 deaths of non-notified cases outside Manchester whic were adjudged by the Registrar-General to be properly referable to this area.

The above figures indicate that notification of pulmonary tuberculosis in the area is very complete.

Until the scheme has established its projected accommodation for non-pulmonary tuberculosis the second figure above will necessarily remain higher than that for pulmonary tuberculosis, where provision is much more complete. Furthermore, 21 of the 46 cases were certified as cases of tubercular meningitis —these had a very short illness as a rule and diagnosis was often in some doubt during life.

Tables and Statistics for the Year 1929.

Insured cases applying for treatment:—

	Males	Females	Total
1914..	730	321	1,051
1915..	572	315	887
1916..	747	316	1,063
1917..	728	359	1,087
1918..	642	261	903
1919..	630	255	885
1920..	645	250	895
1921..	615	255	870
1922..	543	265	808
1923..	539	291	830
1924..	597	371	968
1925..	610	327	937
1926..	562	368	930
1927..	555	296	851
1928..	612	372	984
1929..	610	376	986

Cases of discharged soldiers referred for treatment—271.

Number of patients who had so far recovered that no active signs of disease were found: Insured—227; Uninsured—501.

Contacts examined at their homes and at the Dispensary—904; of these, definite signs of tuberculosis were found in 43.

Grants of food were made in 3,079 instances to 594 families, and 48 grants of clothing were supplied to 38 patients in Hospital and Sanatoria to enable them to derive full benefit from treatment.

Special visits to the number of 13,936 have been paid by the Tuberculosis Nurses, and 469 visits by the Clinical Nurse who attends to domiciliary patients requiring surgical dressings and nursing care.

TABLE I.

NOTIFICATIONS—1929.

Age Periods	NOTIFICATIONS ON FORM A, ETC.												Total Notifications on Form A, etc.
	Number of Primary Notifications												
	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	Total Primary Notifications	
Pulmonary Males	1	11	20	11	69	75	142	157	173	109	20	788	1,031
,, Females	..	7	16	32	77	116	152	97	62	26	10	595	806
Non-Pulmonary Males	5	40	42	17	33	12	22	14	10	4	3	202	262
,, Females	6	25	34	21	22	16	22	13	3	5	2	169	241
Totals	12	83	112	81	201	219	338	281	248	144	35	1,754	2,340

Age Periods	NOTIFICATIONS ON FORM B				Total Notifications on Form B	NOTIFICATIONS ON FORM C, ETC.	
	Number of Primary Notifications					Poor Law Institutions	Sanatoria
	Under 5	5–	10 to 15	Total Primary Notifications			
Pulmonary Males	..	..	..	..	1	223	797
,, Females	..	2	..	2	2	85	484
Non-Pulmonary Males	..	1	1	2	4	6	40
,, Females	..	1	1	2	3	7	57
Totals	..	4	2	6	10	321	1,378

NOTIFICATION OF TUBERCULOSIS.

TABLE 2.

PHTHISIS—NUMBER OF NEW CASES OF PULMONARY TUBERCULOSIS NOTIFIED DURING THE YEARS 1900 TO 1929.

Year	Poor-law Cases	Institutions	Private Practitioners	Total
(1) 1900*	578	455	540	1573
1901	625	373	341	1339
1902	667	305	303	1275
1903	556	550	251	1357
1904	512	440	250	1202
1905	527	588	291	1406
1906	565	510	304	1379
1907	634	646	310	1590
(2) 1908	659	498	346	1503
1909	681	542	384	1607
1910	543	760	356	1659
(3) 1911	517	897	423	1837
(4) 1912	488	947	969	2404
(5) 1913	345	717	1350	2412
1914	483	877	1304	2664
1915	279	740	1194	2213
1916	322	817	1410	2549
1917	470	716	1061	2247
1918	268	563	1015	1846
1919	208	538	845	1591
1920	206	629	672	1507
1921	257	632	722	1611
1922	233	567	656	1456
1923	239	546	659	1444
1924	223	555	731	1509
1925	262	496	746	1504
1926	220	422	765	1407
1927	241	441	756	1438
1928	253	361	824	1438
1929	201	382	802	1385
Total	12262	17510	20580	50352

* This table does not include 425 cases notified in 1899.

(1). Voluntary notification of Pulmonary Tuberculosis—Manchester scheme.

(2). Compulsory notification (Tuberculosis Regulations) from Poor Law institutions.

(3). Compulsory notification from voluntary institutions.

(4). Compulsory notification of Pulmonary Tuberculosis by all practitioners.

(5). Compulsory notification of all forms of Tuberculosis.

TABLE 3.

NEW CASES OF NON-PULMONARY TUBERCULOSIS NOTIFIED DURING THE YEARS 1913-1929, THE ORDER OF THE LOCAL GOVERNMENT BOARD TAKING EFFECT IN FEBRUARY, 1913. (MALES AND FEMALES.)

Year	Total		Total
	Males	Females	
1913	759	714	1,473
1914	519	413	932
1915	422	415	837
1916	418	467	885
1917	433	449	882
1918	345	353	698
1919	206	228	434
1920	280	257	537
1921	295	281	576
1922	321	284	605
1923	350	380	730
1924	316	307	623
1925	322	300	622
1926	239	224	463
1927	277	226	503
1928	214	276	490
1929	204	171	375
Total	5,920	5,745	11,665

PRIMARY NOTIFICATIONS AND DEATHS FROM PULMONARY TUBERCULOSIS, 1917-1929.

TABLE 4.

Pulmonary Tuberculosis	0–	1–	5–	10–	15–	20–	25–	35–	45–	55–	65–	TOTAL Notifications	TOTAL Deaths
Notifications, 1917	12	65	152	166	194	185	410	432	335	181	104	2.236	
Deaths. ,,	4	20	20	42	110	109	189	273	237	121	71		1,196
Notifications, 1918	1	46	106	115	200	177	373	352	278	136	54	1,838	
Deaths. ,,	3	19	16	41	100	84	197	237	230	129	47		1,103
Notifications, 1919	2	44	118	120	169	154	280	324	214	112	53	1,590	
Deaths, ,,	2	14	19	26	88	92	162	212	195	100	41		951
Notifications, 1920	3	22	98	96	142	154	279	300	231	107	38	1,470	
Deaths, ,,	4	3	6	27	73	74	152	205	201	90	33		868
Notifications, 1921	10	39	104	99	137	168	317	302	263	113	46	1,598	
Deaths, ,,	4	16	7	18	110	102	160	232	200	83	35		967
Notifications, 1922	6	38	107	92	138	148	288	293	216	91	39	1,456	
Deaths, ,,	5	15	7	14	74	117	191	202	185	96	41		947
Notifications, 1923	3	23	103	84	159	160	294	273	207	106	32	1,444	
Deaths, ,,	3	12	8	18	96	117	181	190	193	82	31		931
Notifications, 1924	2	30	81	90	174	175	297	298	237	97	28	1,509	
Deaths, ,,	3	8	4	13	91	97	168	218	188	86	30		906
Notifications, 1925	7	41	70	97	152	178	279	269	254	122	35	1,504	
Deaths, ,,	3	13	8	14	109	97	179	193	234	105	42		997
Notifications, 1926	14	39	43	68	165	188	282	254	217	104	33	1,407	
Deaths. ,,	6	21	6	9	66	106	171	200	186	99	35		905
Notifications, 1927	3	36	75	81	138	186	251	275	245	114	34	1,438	
Deaths, ,,	3	15	9	14	83	110	157	159	198	101	32		881
Notifications, 1928	3	16	63	66	144	158	319	258	233	149	29	1,438	
Deaths, ,,	2	8	6	12	65	109	161	167	182	100	31		843
Notifications, 1929	1	18	38	43	146	191	294	254	235	135	30	1385	
Deaths,	1	7	3	7	76	117	179	190	191	121	38		930
Total notifications	67	457	1158	1217	2058	2222	3963	3884	3165	1567	555	20313	
Total deaths	43	171	119	255	1141	1331	2247	2678	2620	1313	507		12425

PRIMARY NOTIFICATIONS AND DEATHS FROM NON-PULMONARY TUBERCULOSIS, 1917-1929.

TABLE 4—*continued*

Non-Pulmonary Tuberculosis	0-	1-	5-	10-	15-	20-	25-	35-	45-	55-	65-	TOTAL	
												Notifications	Deaths
Notifications, 1917	32	186	172	169	103	49	62	39	29	21	17	879	
Deaths, ,, ...	49	111	50	42	27	14	25	18	6	9	8		359
Notifications, 1918	13	141	152	125	89	46	42	31	23	21	10	693	
Deaths, ...	23	86	35	37	29	15	12	12	14	14	10		287
Notifications, 1919	23	75	86	74	63	21	31	23	19	10	6	431	
Deaths, ...	24	66	27	34	22	16	12	11	15	6	4		237
Notifications, 1920	19	74	107	92	73	34	40	26	18	13	4	500	
Deaths, ,, ...	22	62	27	27	20	10	16	17	8	7	6		222
Notifications, 1921	16	91	129	97	69	40	43	21	16	15	8	545	
Deaths, ,, ...	20	61	33	31	36	15	20	18	12	5	1		252
Notifications, 1922	13	134	132	112	77	40	33	24	18	9	13	605	
Deaths, ,, ...	28	85	31	23	18	12	8	8	12	6	11		242
Notifications, 1923	18	124	163	136	86	58	49	41	29	21	5	730	
Deaths, ...	26	55	23	20	24	17	11	15	16	7	7		221
Notifications, 1924	20	127	128	102	91	49	49	25	14	7	11	623	
Deaths, ...	24	82	17	23	27	18	13	7	10	6	2		229
Notifications, 1925	13	129	139	113	79	37	44	24	27	10	7	622	
Deaths, ...	16	55	22	13	16	12	16	8	14	10	2		184
Notifications, 1926	17	86	82	81	63	38	38	23	23	6	6	463	
Deaths, ,, ...	15	45	20	18	16	12	15	13	8	5	3		170
Notifications, 1927	11	96	107	75	60	47	47	28	15	12	5	503	
Deaths, ,, ...	9	47	19	14	19	15	16	8	16	5	4		172
Notifications, 1928	12	74	112	71	71	46	47	26	18	8	5	490	
Deaths, ,, ...	11	35	19	15	14	7	19	15	4	6	4		149
Notifications, 1929	11	65	78	40	55	28	44	27	13	9	5	375	
Deaths.	13	31	17	10	18	17	16	10	3	11	6		152
Total notifications	218	1402	1587	1287	979	533	559	358	262	162	102	7459	
Total deaths	280	821	340	307	286	180	199	160	138	97	68		2876

TABLE 5.

SOURCES OF NOTIFICATION OF TUBERCULOSIS DURING 1929.

Source	Pulmonary	Non-Pulmonary	Totals
Crescent Road Institution	87	20	107
Withington Hospital..	87	16	103
Booth Hall	25	28	53
Outside Poor Law	2	..	2
Manchester Royal Infirmary	39	60	99
Ancoats Hospital	24	22	46
Skin Hospital	..	29	29
St. Mary's Hospital	2	6	8
Northern Hospital	..	3	3
Jewish Hospital	6	3	9
Pendlebury Hospital..	3	10	13
Babies' Hospital	2	..	2
Hulme Dispensary	4	..	4
Gartside Street Dispensary	5	21	26
Hardman Street Dispensary	172	16	188
Bowdon Hospital	..	1	1
Asylums	14	2	16
Schools..	2	4	6
Tuberculosis Staff	67	20	87
Military	3	..	3
Various Sources	39	12	51
Private Practitioners	802	102	904
Child Welfare Centres	..	..	..
Total	1,385	375	1,760

336 tenants have allowed the removal of bedding, etc., for disinfection; or have themselves burned it in a few instances.

70,398 cardboard boxes have been prepared in the office and supplied to patients for spitting purposes in the home.

756 spit bottles have been supplied for use outside the house.

15.326 visits have been made by the Enquiry Officers during the year.

44,315 letters were sent out.

400 notices warning against spitting on floors, etc., have been supplied to offices and workshops.

Table 6.

TUBERCULOSIS (NON-PULMONARY).—PRIMARY CASES NOTIFIED DURING 1929.

Location of Disease	Age Groups																				Totals	
	0—		5—		10—		15—		20—		25—		35—		45—		55—		65—			
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Brain :—Tumour	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Meninges	14	7	4	5	..	5	3	1	2	..	..	2	..	..	..	..	..	..	..	..	23	20
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Glands :—Cervical	10	4	16	12	5	7	13	6	..	4	6	6	1	4	2	..	..	..	1	1	54	44
Mesenteric	..	..	5	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	8	..
Axillary	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1
Inguinal	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Tuberculous Peritonitis	1	1	..	2	2	1	1	4	..	2	2	2	2	..	..	..	1	..	..	..	9	12
Tuberculosis of Abdomen	10	3	3	..	4	..	2	2	..	..	1	1	..	..	..	..	..	..	..	..	20	6
,, of Breast	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
,, of Intestines	..	2	..	2	..	..	1	..	1	2	..	..	1	..	..	..	..	..	..	..	3	6
Joints :—Spine	1	4	5	1	1	1	..	3	2	1	2	2	3	..	2	..	..	1	..	..	16	13
Hip	..	..	1	5	..	2	2	..	1	..	..	2	..	1	1	..	..	1	1	..	6	11
Elbow	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..
Ankle	..	..	1	1	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	2	2
Wrist	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4
Shoulder	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Knee	..	..	1	2	..	..	1	1	..	..	..	..	2	1	..	..	1	..	1	..	6	4
Bones :—Various	..	3	4	1	1	..	3	2	..	1	3	..	4	..	2	..	..	..	..	..	17	7
Tuberculosis of Skin	2	2	1	2	3	3	4	1	1	4	1	6	1	4	..	2	1	1	..	1	14	25
General Tuberculosis	2	3	1	..	..	1	..	..	..	..	1	..	..	2	..	..	..	..	..	..	4	6
Special Organs :—Ear	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bladder, etc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kidney	..	..	..	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	1	2
Testicle, etc.	..	..	..	..	..	..	..	..	3	..	5	..	..	..	3	..	..	..	..	..	11	..
Muscles, etc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rectum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Unclassified	2	..	..	1	..	..	..	2	..	..	1	1	..	..	..	..	1	..	..	..	4	4

TABLE 7.—STATISTICS RELATING TO THE NOTIFICATION OF TUBERCULOSIS.

	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1914 to 1918	1899 Sept 1st to 1913 Dec. 31st	Total
Cases Visited and Registered—													*Phthisis only*	
Males	1058	1106	1173	1100	1232	1204	1277	1324	1285	1371	1288	9607	14170	37195
Females	809	919	866	872	937	1032	1023	1024	928	923	974	7295	8854	26456
Totals	1867	2025	2039	1972	2169	2236	2300	2348	2213	2294	2262	16902	23024	63651
Houses Disinfected—														
1. By Corporation—														
(*a*) With solution of chlorinated lime only	..	..	..	..	..	..	..	997	2133	2082	2507	7863	9015	24597
(*b*) With lime solution only	..	..	..	..	..	..	..	..	..	..	..	..	126	126
(*c*) *By Esmarch's method and solution of chlorinated lime ..	..	..	..	..	1332	1571	1607	717	..	..	..	7416	17232	29875
(*d*) †By fumigating lamp	2934	2693	2083	1635	128	..	..	..	..	..	..	..	..	9473
Totals	2934	2693	2083	1635	1460	1571	1607	1714	2133	2082	2507	15279	26373	64071
2. By Tenants—														
*Esmarch's method or chlorinated lime, etc.	7192	6868	7338	6967	6392	5647	5885	6268	6157	4891	4633	17633	36919	122790
Totals	10126	9561	9421	8602	7852	7218	7492	7982	8290	6973	7140	32912	63292	186861
Specimens of Sputum examined—														
Positive	392	360	348	347	325	391	558	528	534	437	305	3420	1705	14650
Negative	1698	1548	1573	1363	1415	1419	1753	1946	1585	1729	1342	8117	12176	37664
Totals	2090	1908	1921	1710	1740	1810	2311	2474	2119	2166	1647	11537	18881	52314
Cases reported as sent to Hospital ..	1919	1948	2062	1844	2027	2077	1942	2052	2139	2153	2035	11230	22669	56097
Notified from Common Lodging-houses	71	62	56	53	76	65	84	80	102	115	80	927	3109	4880
Number of cases under observation ..	10197	10494	10586	10680	10379	9949	9561	9258	8606	7990	7318	31367	33702 approx.	

* Esmarch's method resumed in August, 1922, after suspension due to Food Control Order.

† Method commenced on 1st December, 1925.

The fate of patients treated in the Crossley Sanatorium and Baguley Sanatorium during the last ten years is set forth in the following tables. Baguley Sanatorium is in the main an institution for advanced cases.

In addition to these, however, cases for observation are sent, and these may, if suitable, be transferred later to the other sanatoria at Delamere and Abergele.

The earlier the stage of the disease at which a patient can be given sanatorium treatment the greater the prospect of permanent arrest. Properly selected cases have their best chance of arrest in the shortest time by intelligently carried out sanatorium treatment; moreover, they learn restraint, discipline, and an ordered way of life, which are essential for maintenance of health and to prevent relapses.

TABLE 8.

CROSSLEY SANATORIUM.

Males.

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1929
1920	105	22	1	42	28	34
1921	124	26	2	60	22	40
1922	115	28	2	58	23	32
1923	125	29	1	61	17	46
1924	114	32	2	50	18	44
1925	131	25	3	54	15	59
1926	107	44	..	39	12	56
1927	112	39	..	21	12	79
1928	122	27	..	21	6	95
1929	97	53	..	5	2	90
Total	1,152	325	11	411	155	575

TABLE 8—*continued.*

CROSSLEY SANATORIUM—*continued.*

Females.

Year	No. of new cases	No. of re-admissions	Died in the Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1929
1920	56	8	..	18	16	22
1921	91	12	..	42	18	31
1922	92	13	..	43	17	32
1923	121	24	1	61	18	42
1924	135	25	..	53	30	52
1925	111	33	1	44	26	41
1926	127	32	..	44	20	63
1927	140	24	..	35	16	89
1928	126	33	..	24	13	89
1929	139	22	..	4	5	130
Total	1,138	226	2	368	179	591

TABLE 9.

BAGULEY SANATORIUM.

Males.

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1929
1920	475	212	118	199	49	109
1921	349	196	106	158	38	47
1922	356	166	128	159	27	42
1923	365	151	116	146	37	66
1924	363	106	117	161	16	69
1925	326	88	120	114	23	69
1926	297	78	100	96	19	82
1927	307	84	90	84	17	116
1928	361	88	92	87	14	168
1929	355	83	79	37	14	225
Total	3,554	1,252	1,066	1,241	254	993

Females.

Year	No. of new cases	No. of re-admissions	Died in Sanatorium	Died elsewhere	Lost sight of	Known to be still living, Dec. 31st, 1929
1920	166	48	54	70	19	23
1921	164	55	55	79	13	17
1922	198	50	66	79	17	36
1923	188	38	67	82	18	21
1924	225	48	65	107	13	40
1925	199	35	71	66	22	40
1926	216	48	75	72	16	53
1927	185	50	53	63	13	56
1928	168	38	44	37	4	83
1929	207	59	61	12	3	131
Total	1,916	469	611	667	138	500

They indicate a continuance of distress:—

The number of cases of Tuberculosis in which the income of the individual or family showed varying amounts of deficit under an assumed standard of living, and the number in which assistance was given to the individual or the family, or both, is shown in the following tables:—

TABLE 10.

TABLE SHOWING PARTICULARS OF DISTRESS IN CASES OF TUBERCULOSIS NOTIFIED DURING THE YEAR 1929. CLASSIFIED ACCORDING TO THE REQUIREMENTS OF THE FAMILY IN EXCESS OF THE INCOME. FOOD, CALCULATED ON THE ATWATER SCALE; HOUSEHOLD SUNDRIES ON MR. ROWNTREE'S SCALE. TAKING THE UNITS OF FOOD AND HOUSEHOLD SUNDRIES USED IN 1913 AS STANDARDS, VARIOUS AMOUNTS HAVE BEEN USED. IN 1922 THE AMOUNT ADDED WAS 125 PER CENT., REDUCED LATER TO 100, AND THEN TO 90 PER CENT. THROUGHOUT 1929 THE AMOUNT ADDED WAS 90 PER CENT.

PULMONARY CASES.

Conditions affecting Individual Cases	Shortage up to—in Shillings.													
	—5/-	—10/-	—11/-	—12/-	—13/-	—14/-	—15/-	—16/-	—17/-	—18/-	—19/-	—20/-	—25/- +	Total Shortages
Living December 31st, 1929 ..	39	34	8	2	4	3	4	3	2	3	2	..	5	109
Dead December 31st, 1929 ..	23	16	5	..	2	..	..	..	1	..	..	..	3	50
Relief from Guardians	15	13	5	2	2	1	2	2	1	1	1	..	1	46
Assistance from the £2,750 Grant (Family)	9	23	8	..	1	2	2	..	1	..	..	..	1	47
Assistance from the £1,500 Grant (Individual)	21	9	..	..	1	..	..	..	1	1	..	..	1	34

TABLE 11.

NON-PULMONARY CASES.

Conditions affecting Individual Cases	Shortage up to—in Shillings.													Total Shortages
	—5/-	—10/-	—11/-	—12/-	—13/-	—14/-	—15/-	—16/-	—17/-	—18/-	—19/-	—20/-	—25/- +	
Living December 31st, 1929 ..	9	8	1	3	1	..	..	..	..	2	1	..	..	25
Dead December 31st, 1929 ..	6	..	..	1	..	..	..	1	..	..	..	..	..	8
Relief from Guardians	6	3	..	..	1	..	..	..	..	1	..	..	..	11
Assistance from £2,750 Grant ..	7	5	..	2	..	..	..	..	..	..	1	..	..	15
Assistance from £1,500 Grant ..	3	1	1	1	..	..	..	..	..	..	..	..	..	6

With reference to Tables 10 and 11 it should be noted that Corporation assistance can only be given in cases which do not fall into the category of destitution.

TABLE 12.

SOURCES OF PRIMARY NOTIFICATION OF NON-PULMONARY CASES FOR THE YEARS 1918 TO 1929.

Source	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
sall Hospital	49	22	15	15	11	21	34	24	13	14	16	20
gton	..	..	11	29	39	33	29	22	20	11	13	16
Hall Infirmary	45	33	43	60	35	38	47	67	52	58	43	28
e Poor Law	2	1	..	..	..	..	2	..	..	..	..	..
Infirmary..	111	58	95	95	69	125	99	99	80	106	98	60
ts Hospital	57	34	31	27	45	76	76	57	50	47	40	22
ospital	35	32	46	66	37	48	41	37	38	37	37	29
ry's Hospital	25	2	4	..	21	21	15	14	7	17	13	6
ern Hospital	1	1	9	4	17	30	5	15	7	7	9	3
Hospital	1	19	11	1	1	1	5	10	7	1	7	3
bury Hospital	8	5	2	3	4	8	8	16	10	5	12	10
' Hospital	..	..	..	..	..	..	..	..	6	2	..	..
e Dispensary	1	..	..	..	..	..	..	..	2	..	..	..
de Street Dispensary	66	19	25	63	36	71	41	61	33	34	22	21
man Street Dispensary	15	9	23	23	33	21	11	7	8	9	21	16
on Hospital	..	..	2	..	..	3	1	..	..	..	1	1
ms	6	2	8	7	2	..	2	1	1	1	..	2
ls	5	3	37	31	38	34	23	26	11	10	20	4
rculosis Office Staff	6	16	16	7	13	20	19	9	6	11	12	20
ry	14	2	..	1	3	7	1	2	2	1	..	..
us Sources	17	8	11	13	21	20	14	29	9	19	22	12
te Practitioners..	234	168	148	131	180	152	150	126	101	113	104	102
	698	434	537	576	605	730	623	622	463	503	490	375

Table 13.

Primary Notifications of Pulmonary and Non-Pulmonary Tuberculosis received from Municipal Wards during 1929.

Wards	Pulmonary	Non-Pulmonary	Totals
1. Exchange	1	1	2
2. New Cross	98	20	118
3. St. Clement's	22	5	27
4. Oxford	6	..	6
5. St. John's	20	2	22
6. St. Ann's	..	..	..
7. St. Michael's	54	17	71
8. Collyhurst	68	18	86
9. Cheetham	33	10	43
10. Collegiate Church	39	10	49
11. Crumpsall	22	3	25
12. Blackley	30	6	36
13. Harpurhey	38	14	52
14. Moston	33	10	43
15. Newton Heath	29	15	44
16. Miles Platting	51	16	67
17. Bradford	55	22	77
18. Beswick	45	12	57
19. Ardwick	66	10	76
20. Openshaw	53	15	68
21. St. Mark's	55	17	72
22. Longsight	30	3	33
23. All Saints'	42	16	58
24. St. Luke's	62	14	76
25. Medlock Street	64	21	85
26. St. George's	69	14	83
27. Moss Side East	33	12	45
28. Moss Side West	26	8	34
29. Chorlton-cum-Hardy	47	11	58
30. Didsbury	17	4	21
31. Withington	45	13	58
32. Gorton North	49	10	59
33. Gorton South	43	14	57
34. Levenshulme	19	4	23
35. Rusholme	21	8	29
Total—City of Manchester	1,385	375	1,760

TABLE A.—RETURN SHOWING THE WORK OF THE DISPENSARY DURING THE YEAR 1929.

Diagnosis	Pulmonary				Non-Pulmonary				Total			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New cases examined during the year (excluding contacts)—												
(*a*) Definitely tuberculous	548	411	29	23	61	55	56	50	609	466	85	73
(*b*) Doubtfully tuberculous..	..	..	..	..	..	..	..	..	127	91	11	3
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	474	494	152	161
B.—Contacts examined during the year—												
(*a*) Definitely tuberculous	10	17	1	2	..	..	6	7	10	17	7	9
(*b*) Doubtfully tuberculous..	..	..	..	..	..	..	..	..	12	29	17	17
(*c*) Non-tuberculous	..	..	..	..	..	..	..	..	52	164	317	253
C.—Cases written off the Dispensary Register as—												
(*a*) Cured	110	97	15	14	71	75	56	48	181	172	71	62
(*b*) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error)	..	..	..	..	..	..	..	..	530	667	473	420
D.—Number of persons on Dispensary Register on December 31st—												
(*a*) Diagnosis completed	2,815	2,008	282	255	601	651	441	365	3,416	2,659	723	620
(*b*) Diagnosis not completed	..	..	..	..	..	..	..	..	53	39	29	22

Total number of cases of Tuberculosis who received Treatment from the Dispensary ..	643
Total number of attendances at the Dispensary	15,877

TABLE B.—INSURED CASES TREATED IN 1929.

Residential	1,364
Dispensary	48
Domiciliary	2,714
Total	4,126

ANALYSIS OF CASES TREATED.

TABLE I.—*Residential* (*Insured*).

INSTITUTION	Total Cases Treated (1)		Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	St Re Ti on
	Males	Females	Improved	Without Improvement			
	(1)		(2)	(3)	(4)	(5)	
			Pulmonary				
Baguley	514		185	61	104	..	
		256	72	29	62	..	
Crossley	152		109	13	..	3	
		144	102	10	..	2	
Abergele	138		93	10	..	..	
		22	11	3	..	..	
Barrowmore	86		31	10	4	6	
		..	..	..	..	..	
Frimley	5		1	..	..	..	
		..	..	..	..	..	
Total Pulmonary	895	422	604	136	170	11	
			Non-Pulmonary				
Manchester Royal Infirmary ..	11		10	1	..	..	
		16	10	..	..	..	
Skin Hospital	2		2	..	..	..	
		6	6	..	..	..	
Ancoats Hospital	2		2	..	..	..	
		..	..	..	..	..	
Shropshire Orthopœdic Hospital	5		3	..	..	..	
		5	1	1	..	..	
Total Non-pulmonary ..	20	27	34	6	..	..	
TOTAL—ALL FORMS	915	449	638	142	170	11	

---

* The figures in column (5) relate to cases as to the progress of which no definite r available for various reasons—*e.g.*, the withdrawal from the Institution of the insured themselves before the expiration of the period for which they were nominated for the tre

TABLE II.—*Residential (Uninsured).*

ITUTION	Total Cases Treated			Discharged from Institutions		Died	* Residential Treatment discontinued in other cases	Still under Residential Treatment on 1st Jan. 1930
	Males	Females (1)	Children	Improved (2)	Without Improvement (3)	(4)	(5)	(6)
			Pulm	*onary*				
.. .. ..	123			47	16	26	..	34
		121		36	17	33	..	35
			..	..	..	..	..	..
.. .. ..	35			21	3	..	1	10
		56		43	2	..	2	9
			..	..	..	..	..	..
.. .. ..	22			13	2	..	..	7
		8		4	2	..	..	2
			..	..	..	..	..	..
rc	12			4	3	1	..	4
		..		..	..	..	..	..
			..	..	..	..	..	..
.. .. ..	4			1	..	..	..	3
		..		..	..	..	..	..
			..	..	..	..	..	..
Pulmonary	196	185	..	169	45	60	3	104
			Non-P	*ulmonary*				
.. .. ..	..			..	..	..	..	..
		..		..	..	..	..	..
			11	1	..	..	..	10
er Royal y	7			6	..	..	..	1
		8		5	2	..	..	1
			13	10	2	..	..	1
ital	2			2	..	..	..	..
		6		6	..	..	..	..
			7	6	..	..	..	1
Iospital ..	2			2	..	..	..	..
		1		1	..	..	..	..
			4	3	..	..	..	1
Ortho- Iospital ..	2			1	..	..	..	1
		2		1	..	..	..	1
			..	..	..	..	..	..
Non-Pul- nary	13	17	35	44	4	..	..	17
LL FORMS..	209	202	35	213	49	60	3	121

figures in column (5) relate to cases of which no definite report is available for various —*e.g.*, the withdrawal from the Institution of the persons themselves before the expiration period for which they were nominated for the treatment.

Under the Corporation scheme, patients suffering from surgical tuberculosi have received treatment at the Abergele Sanatorium (children only), Mancheste Royal Infirmary, Shropshire Orthopædic Hospital, and Ancoats Hospital and cases of tuberculosis of the skin have been treated at the Skin Hospital.

The types of case are summarised below :—

Bones and Joints	38
Glands	26
Genito-Urinary Tract	6
Abdomen	7
Lupus Vulgaris	192
Toxi-Tuberculids	3
Bazins Disease	6
Tuberculous Ulceration of Skin ..	15
Tongue	1

TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED).

1919.

	No Tubercle Bacilli found.					*Tubercle Bacilli found.*				
Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	26	18	7	1	M	7	5	..	2
	F	9	6	3	..	F	3	3	..	..
II.	M	14	8	2	4	M	12	6	2	4
	F	11	8	2	1	F	10	7	2	1
III.	M	4	1	2	1	M	3	2	1	..
	F	1	1	..	..	F	1	..	..	1
	M & F	65	42	16	7	M & F	36	23	5	8

1920.

I.	M	24	17	2	5	M	15	8	3	4
	F	7	4	2	1	F	4	1	2	1
II.	M	20	10	6	4	M	7	2	..	5
	F	7	4	2	1	F	3	1	2	..
III.	M	2	..	..	2	M	2	2	..	..
	F	1	1	..	..	F	2	2	..	..
	M & F	61	36	12	13	M & F	33	16	7	10

TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1921.

No Tubercle Bacilli found. *Tubercle Bacilli found.*

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	30	21	5	4	M	16	11	3	2
	F	25	16	9	..	F	3	1	2	..
II.	M	25	16	4	5	M	16	9	4	3
	F	9	7	1	1	F	4	4	..	..
III.	M	5	3	..	2	M	1	..	..	1
	F	4	4	..	..	F	..	..	..	..
	M & F	98	67	19	12	M & F	40	25	9	6

1922.

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	40	22	11	7	M	13	10	1	2
	F	17	11	4	2	F	4	3	1	..
II.	M	21	13	4	4	M	22	11	6	5
	F	13	9	3	1	F	9	6	3	..
III.	M	9	7	1	1	M	3	2	1	..
	F	3	1	1	1	F	..	..	..	..
	M & F	103	63	24	16	M & F	51	32	12	7

1923.

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	20	11	6	3	M	18	10	5	3
	F	16	12	2	2	F	2	1	..	1
II.	M	20	15	3	2	M	3	1	..	2
	F	5	3	1	1	F	5	3	1	1
III.	M	4	3	1	..	M	6	2	1	3
	F	2	2	..	..	F	1	..	..	1
	M & F	67	46	13	8	M & F	35	17	7	11

1924.

Stage	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	57	39	10	8	M	16	12	3	1
	F	25	19	4	2	F	3	3	..	..
II.	M	35	25	4	6	M	18	10	4	4
	F	19	16	1	2	F	2	2	..	..
III.	M	13	8	..	5	M	7	5	1	1
	F	9	8	1	..	F	3	2	1	..
	M & F	158	115	20	23	M & F	49	34	9	6

TABLES SHOWING AFTER HISTORY OF ARRESTED CASES (INSURED)—continued

1925.

	No Tubercle Bacilli found.					*Tubercle Bacilli found.*				
Stage	Sex	Number of cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died	Sex	Number of Cases taken off Register	Number known to be still living at end of 1929	Lost sight of	Died
I.	M	31	28	3	..	M	18	12	3	3
	F	19	15	4	..	F	6	5	..	1
II.	M	30	24	6	..	M	14	11	1	2
	F	12	10	2	..	F	8	5	3	..
III.	M	6	6	..	..	M	4	2	..	2
	F	5	3	2	..	F	2	1	..	1
	M & F	103	86	17	..	M & F	52	36	7	9
1926.										
I.	M	25	19	5	1	M	12	10	2	..
	F	20	13	7	..	F	4	4	..	..
II.	M	21	18	2	1	M	9	7	2	..
	F	6	5	1	..	F	2	2	..	..
III.	M	10	8	..	2	M	5	5	..	..
	F	2	2	..	..	F	..	..	..	..
	M & F	84	65	15	4	M & F	32	28	4	..
1927.										
I.	M	21	15	6	..	M	6	6	..	..
	F	26	22	4	..	F	1	1	..	..
II.	M	13	12	..	1	M	13	11	2	..
	F	6	6	..	..	F	5	5	..	..
III.	M	6	4	1	1	M	3	3	..	..
	F	1	..	1	..	F	..	..	..	..
	M & F	73	59	12	2	M & F	28	26	2	..
1928.										
I.	M	32	32	..	..	M	11	11	..	..
	F	28	25	3	..	F	5	5	..	..
II.	M	28	24	2	2	M	6	5	1	..
	F	14	12	2	..	F	2	2	..	..
III.	M	12	11	1	..	M	3	2	..	1
	F	3	3	..	..	F	3	3	..	..
	M & F	117	107	8	2	M & F	30	28	1	1

BAGULEY SANATORIUM.

By Dr. H. G Trayer, Medical Superintendent.

The number of available beds was 333.

The number of patients admitted was 713, the daily average number of beds occupied being 326·42.

The table below gives the number of patients in hospital each month in the years 1925, 1926, 1927, 1928, and 1929:—

	1925	1926	1927	1928	1929
January	300	318	325	323	321
February	310	321	328	328	324
March	319	321	328	326	324
April	325	322	326	326	325
May	325	332	325	326	326
June	325	325	321	323	325
July	332	326	326	329	327
August	329	326	326	325	328
September	316	325	327	326	328
October	326	327	327	327	329
November	322	327	328	329	329
December	318	325	325	324	328

In January and February, 1925, the number of available beds was 327, owing to the relaying of the floor in one of the wards.

On December 31st, 1929, there were 76 patients who had been in the institution for a longer period than one year, as follows:—

Patients in hospital 1–2 years	41
,, ,, 2–3 ,, ...	15
,, ,, 3–4 ,, ...	4
,, ,, 4–5 ,, ...	11
,, ,, over 5 ,, ...	5

Number of patients in hospital, January 1st	316
,, ,, admitted during the year	713
,, ,, discharged ,, ,, ...	469
,, ,, who died ,, ,, ...	231
Total number of patients treated ,, ,, ...	1,029
Patients remaining in hospital, December 31st	329

The average length of stay of patients discharged during the period :—

Males	158·93 days.
Females	188·15 ,,

Cases admitted from the districts of the Bucklow Joint Hospital Board are included in the above totals. The details of these cases are :—

On January 1st, 1929, there were 6 patients in the Sanatorium ; 9 patients were admitted during the period, 6 patients were discharged, and 6 died ; 3 patients remained in the hospital on December 31st.

Pathological Laboratory Report :—

Number of specimens of sputum examined :—

Number of examinations	3,254
Positive	1,456
Negative	1,798

Other examinations :—

Special examination of urine	33
Pleural effusion	3
Pus	14

(In the examinations tubercle bacilli were found in the following :—Urine 3, pus 3.)

A large number of Wassermann's reactions were again carried out by the Public Health Laboratory.

X-Ray Report.

Number of patients screened	834
Number of skiagrams taken	196

Dental Report.

Patients seen	323
Fillings	9
Extractions	250
Dentures	3
Repairs and adjustments to dentures	14
Scaling	6

In addition, the Dentist has paid numerous visits to the wards for the purpose of examining the mouths of bed patients.

SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS SUFFERING FROM ONARY TUBERCULOSIS AND OF OBSERVATION OF DOUBTFUL CASES DISCHARGED NG THE YEAR.

ion ion	Age at Discharge	Condition on Discharge	Duration of Stay									Positive Sputum on Admission—Negative on Discharge
			Under 3 months		3—6 months		6—12 months		More than 12 months		Total	
			M.	F.	M.	F.	M.	F.	M.	F.		
	Ages 15—24	Improved ..	6	4	5	5	3	4	..	..	27	..
		Stationary ..	..	1	..	..	..	..	..	..	1	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	1	2	..	1	..	..	..	1	5	
	Ages 25—34	Improved ..	4	4	3	3	1	1	..	1	17	..
		Stationary ..	1	..	..	..	..	..	..	..	1	
		Worse	..	1	1	..	..	..	..	..	2	
		Died	..	..	..	..	..	..	..	..	..	
B. :	Ages 35—44	Improved ..	7	6	2	2	..	1	..	..	18	..
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	2	..	..	..	..	2	
	Ages 45—54	Improved ..	8	..	1	2	1	..	..	..	12	..
		Stationary ..	3	..	..	..	..	..	..	..	3	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	1	..	..	..	..	..	1	..	2	
	Ages 55 and over	Improved ..	4	1	3	..	1	..	..	..	9	..
		Stationary ..	2	..	..	..	1	..	..	..	3	
		Worse	..	..	..	..	1	..	..	..	1	
		Died	1	..	..	..	..	..	..	..	1	

The diagnosis in the ten deaths recorded under T.B. Minus Group, verified in six cases by autopsy and by clinical findings in four, is as follows :—

Age	Sex	Remarks
16	F.	Clinical findings : pulmonary tuberculosis. Autopsy refused.
18	F.	Findings at autopsy : pulmonary tuberculosis ; tuberculous peritonitis ; tuberculous meningitis.
20	F.	Clinical findings : pulmonary tuberculosis. Autopsy refused.
23	F.	Clinical findings : pulmonary tuberculosis ; spontaneous pneumothorax. Autopsy refused.
24	M.	Findings at autopsy : pulmonary tuberculosis.
39	F.	Findings at autopsy : broncho-pneumonia ; pulmonary tuberculosis
43	F.	Clinical findings : pulmonary tuberculosis ; laryngeal tuberculosis Autopsy refused.
52	M.	Findings at autopsy : pulmonary tuberculosis ; chronic bronchitis emphysema.
54	M.	Findings at autopsy : pulmonary tuberculosis.
62	M.	Findings at autopsy : pulmonary tuberculosis ; spontaneous pneumothorax ; chronic bronchitis ; emphysema.

ification dmission	Age at Discharge	Condition on Discharge	Duration of Stay									Positive Sputum on Admission— Negative o Discharge
			Under 3 months		3—6 months		6—12 months		More than 12 months		Total	
			M.	F.	M.	F.	M.	F.	M.	F.		
ss T.B. PLUS, OUP I.	Ages 15—24	Improved ..	..	..	..	..	1	2	..	..	3	1
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 25—34	Improved ..	2	..	1	..	..	1	..	..	4	1
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 35—44	Improved ..	1	1	..	..	..	..	..	..	2	2
		Stationary ..	..	..	1	..	..	..	..	..	1	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 45—54	Improved ..	1	..	..	..	..	..	..	..	1	1
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	
	Ages 55 and over	Improved ..	1	..	..	..	..	..	..	..	1	1
		Stationary ..	..	..	..	..	..	..	..	..	..	
		Worse	..	..	..	..	..	..	..	..	..	
		Died	..	..	..	..	..	..	..	..	..	

Classification on Admission	Age at Discharge	Condition on Discharge	Duration of Stay									Posit Sputu Admiss Negati Disch
			Under 3 months		3—6 months		6—12 months		More than 12 months		Total	
			M.	F.	M.	F.	M.	F.	M.	F.		
CLASS T.B. PLUS, GROUP II.	Ages 15—24	Improved ..	7	2	4	11	7	4	3	2	40	(
		Stationary ..	2	..	..	..	..	1	1	..	4	
		Worse	1	..	..	..	2	..	1	2	6	
		Died	1	..	2	1	..	1	..	3	8	
	Ages 25—34	Improved ..	9	8	10	3	3	3	5	3	44	1(
		Stationary ..	1	2	..	..	..	2	..	1	6	
		Worse	..	..	2	..	..	..	..	..	2	
		Died	..	..	2	..	1	..	3	1	7	
	Ages 35—44	Improved ..	20	5	16	2	3	2	2	2	52	1
		Stationary ..	1	1	2	..	..	1	..	1	6	
		Worse	1	..	1	..	1	1	1	..	5	
		Died	1	..	..	..	2	1	4	..	8	
	Ages 45—54	Improved ..	9	1	12	2	3	1	3	..	31	14
		Stationary ..	3	..	..	..	1	..	1	2	7	
		Worse	2	..	..	..	..	..	..	..	2	
		Died	3	..	..	..	3	3	3	2	14	
	Ages 55 and over	Improved ..	3	1	4	..	6	..	7	..	21	11
		Stationary ..	3	..	..	..	2	..	..	..	5	
		Worse	..	..	..	..	1	..	..	..	1	
		Died	2	..	1	..	..	..	2	..	5	

ication mission	Age at Discharge	Condition on Discharge	Duration of Stay									Positive Sputum on Admission—Negative on Discharge
			Under 3 months		3—6 months		6—12 months		More than 12 months		Total	
			M.	F.	M.	F.	M.	F.	M.	F.		
; T.B. us, p III.	Ages 15—24	Improved	..	..	1	2	3	3	..	1	10	3
		Stationary	..	3	..	1	..	..	..	1	5	
		Worse	3	5	3	1	..	1	..	..	13	
		Died	10	30	1	8	4	3	3	1	60	
	Ages 25—34	Improved	7	1	2	3	1	..	..	..	14	..
		Stationary	3	..	..	..	..	1	..	..	4	
		Worse	2	2	..	1	..	1	..	..	6	
		Died	17	13	1	3	1	..	2	1	38	
	Ages 35—44	Improved	2	1	1	1	1	..	..	..	6	2
		Stationary	3	3	..	1	..	..	..	1	8	
		Worse	1	1	1	2	..	..	..	2	7	
		Died	20	6	2	..	1	4	..	..	33	
	Ages 45—54	Improved	2	..	3	..	..	..	1	..	6	3
		Stationary	1	1	..	..	..	..	2	..	4	
		Worse	6	1	1	1	..	..	..	..	9	
		Died	19	5	2	1	1	..	1	1	30	
	Ages 55 and over	Improved	..	..	2	..	..	..	..	..	2	1
		Stationary	3	..	..	..	..	..	..	..	3	
		Worse	1	..	..	..	..	1	1	..	3	
		Died	4	2	3	..	2	1	..	..	12	

Summary of Tables.

Classification	Condition on Discharge			
	Improved	Stationary	Worse	Died
Class T.B. Minus	83	8	3	10
T.B. Plus, Group I... ..	11	1	..	..
T.B. Plus, Group II. ..	188	28	16	42
T.B. Plus, Group III. ..	38	24	38	173
Total	320	61	57	225

Observation Cases.

Age at Discharge	Condition on Discharge	Duration of Stay							
		Under 3 months		3—6 months		6—12 months		More than 12 months	
		M.	F.	M.	F.	M.	F	M.	F.
Ages 15—24	Improved ..	7	4	1	3	..	1	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..
	Died	..	..	..	..	..	..	..	..
Ages 25—34	Improved ..	5	2	..	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..
	Died	1	..	..	..	..	..	..	..
Ages 35—44	Improved ..	6	1	..	..	..	1	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..
	Died	3	..	..	..	..	..	..	..
Ages 45—54	Improved ..	6	1	..	1	..	..	..	..
	Stationary ..	1	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..
	Died	1	..	..	..	..	..	..	..
Ages 55 and over	Improved ..	6	1	..	..	..	..	..	..
	Stationary ..	..	..	..	..	..	..	..	..
	Worse	..	..	..	..	..	..	..	..
	Died	3	..	..	..	..	..	..	..

Of the above observation cases 18 were accepted as cases of tuberculosis, 36 were not accepted, and 1 left the institution before completion of diagnosis.

The above table is of particular interest. It will be noted that eight deaths occurred, all among males. Two of the deaths were due to pulmonary tuberculosis, five to carcinoma of the lung, and one to lymphadenoma—all verified by post-mortem examination.

There appears little doubt that the evidence to be gathered from the post-mortem records for the last eight years at this sanatorium points quite clearly to a definite increase in the incidence of primary carcinoma of the lung, usually originating from a bronchus.

The difficulties of early diagnosis of pulmonary neoplasm are admittedly considerable. In my investigation into a number of cases of primary malignant neoplasm of the lung, it was found that the occurrence of an initial hæmoptysis was more than twice as frequent as it is in the case of pulmonary tuberculosis. The occurrence of pleural effusion is much more common in primary neoplasm than in pulmonary tuberculosis. Its incident is higher in males than in females; the majority of cases occur after 40 years of age, but one case in my series was aged 20 years. The diagnosis in the advanced stage may quite readily be confused with advanced pulmonary tuberculosis, and these cases come under observation too late for treatment to be of any avail.

In order to draw attention to the importance of early diagnosis, it is suggested that a primary malignant neoplasm of the lung may be suspected in persons over 45 years who give a negative history of chest trouble until the onset of such symptoms as persistent cough, a slight hæmoptysis, possibly dyspnœa tending to become more noticeable, and sputum, if present, negative for tubercle bacilli. Clinical signs characterised rather by their absence than their presence. Radiological examination may be of the greatest assistance, but it is more likely that bronchoscopic examination will be the surest method of clearing up the diagnosis, particularly of a carcinoma—this type usually originates in one of the main bronchi.

Autopsies.

Forty-five autopsies were carried out on males and fifteen on females.

There is still great difficulty in obtaining consent for post-mortem examinations.

The following table gives the chief findings at autopsy on these sixty cases. It is noted that only one localised spontaneous pneumothorax was found. There is an increase in the number of cases of tubercular enteritis over last year's figures. Ulceration is almost invariably in the lower end of the ileum, tending to spread up the small intestine.

Findings	Male	Female
Tuberculosis of the kidney	2	..
,, ,, larynx	6	4
,, ,, spine	1	1
,, ,, spleen	..	1
Tuberculous meningitis	..	1
,, peritonitis	1	3
Amyloid disease	2	1
Atheroma of Aorta	14	3
Bronchitis	3	..
Carcinoma of the gall bladder	1	..
Chronic endocarditis	1	..
Chronic parenchymatous nephritis	2	..
Cirrhosis liver	..	1
Degeneration of the cardiac muscle (gross)	3	1
Diabetes mellitus	1	..
Hæmoptysis	3	..
Ischio-rectal abscess	1	..
Lupus erythematosis	..	1
Mitral stenosis	3	..
Myelitis	..	1
Œdema of lungs	1	..
Pericarditis (adherent)	1	..
Pneumonia	1	2
Pyonephritis	..	1
Pyopneumothorax	1	..
Spontaneous pneumothorax	3	..
Uterine fibroma	..	1
Non-pulmonary tuberculosis :—		
Carcinoma of the lungs	5	..
Lymphadenoma	1	..
Total	57	22

Complications occurring amongst Fatal Cases during the year.

Complications	Male	Female
Tuberculosis of bone (other than spine)	2	2
,, of the kidney	2	..
,, ,, larynx	31	31
,, ,, spine	1	1
,, ,, spleen	1	1
,, ,, tongue	1	..
Tuberculous adenitis (neck)	1	1
,, enteritis	11	6
,, meningitis	1	2
,, peritonitis	5	13
Amyloid disease	2	1
Arterio-sclerosis	1	..
Atheroma of Aorta (well defined)	14	3
Bronchitis	3	2
Carcinoma of the gall bladder	1	..
Cardiac hypertrophy	1	1
Chronic endocarditis	1	..
Chronic parenchymatous nephritis	1	..
Cirrhosis liver	..	1
Congenital syphilis	..	1
Degeneration of cardiac muscle (gross)	3	1
Diabetes mellitus	1	..
Hæmoptysis	12	4
Hydrocele	1	..
Ischio-rectal abscess	1	..
Lupus erythematosis	..	1
Mitral stenosis	3	..
Œdema of lungs	1	..
Pericarditis (adherent)	1	..
Pneumonia	1	3
Pyonephritis	..	1
Pyopneumothorax	1	..
Rheumatoid arthritis	1	..
Right Inguinal Hernia	..	1
Spontaneous pneumothorax	5	1
Uterine fibroma	..	1
Non-pulmonary tuberculosis :—		
Carcinoma of the lungs	5	..
Lymphadenoma	1	..
Total	117	79
Uncomplicated cases	41	36

The total number of deaths was 231, made up of 133 males and 98 females, representing a case fatality of 22·41 per cent.

The mortality figures are such that it is necessary to seek some explanation. The increased number of deaths is mainly due to the heavy mortality amongst young adolescent females. The majority of these cases were only a comparatively short time in hospital, and the disease was of short duration previous to admission. This increased death rate among young females has been noted throughout the country. It would appear that apart from the periodic rise and fall of mortality figures at different age groups, there may be some other common factor of economic origin affecting this section of the community.

Thirteen fatal cases were under one week in the hospital.

Thirty-six fatal cases were over one week in the hospital but less than three.

The average length of time in hospital of fatal cases was :—

Males	212·51 days.
Females	203·04 ,,

Patients.

Despite the heavy mortality, the morale of the sanatorium has been maintained, though at the cost of a great deal of individual effort. The chief function of this sanatorium is to retain the advanced case until death supervenes, and this is a matter that concerns the community. It cannot be too strongly stressed that propaganda should teach that while the dying consumptive is worthy of all care and sympathy, he or she should not be allowed to become a menace either to their own relations or to the community in general.

Lectures have been given as in former years.

Special Methods of Treatment.

Sanocrysin : It is not intended to report in particular this year on this treatment that has now been introduced in a number of cases. Much experience has been gained in its administration, and results generally are such as to lead one to extend its sphere of application. The dosage used has been small and given at weekly intervals over a fairly long period of time. It appears to be of value, but must be used with great care and discrimination.

Occupational Treatment.

Still further progress is being made in developing this important side of treatment. A complete scheme for female patients will be inaugurated in the new year.

The Handicraft Section provided an exhibit at a Health and Hygiene Exhibition in Manchester. It evoked much interest and an encouraging demand for the articles displayed.

Extensions and Improvements.

A motor lorry was provided in June ; this has considerably facilitated the transport of goods and coal.

A refrigerator plant was installed during the year. The need and the advantages of such equipment does not require any comment here.

A waiting room for patients' visitors on the weekly visiting day was opened in November.

Further macadaming of the paths in the sanatorium grounds was carried out.

It is hoped to provide laundry facilities so that female patients may wash fragile articles themselves.

The reserve electricity supply is deteriorating very rapidly, and it appears that the best procedure would be to obtain an alternative supply from the Corporation Electricity Department.

The need for a more modern radiological apparatus is a very pressing one.

Recreation.

This important side of sanatorium life has been maintained at its usual high level. Sincere thanks are again due to the Gaumont Film Company for their kindness in supplying films weekly during the winter months.

On behalf of the patients and staff a very sincere expression of thanks is recorded to the many amateur and professional entertainers who so freely gave their services throughout the winter season, particularly Miss Edna Latonne and Company (through the kindness of Mr. F. Haytor, Altrincham Hippodrome), the Minnehaha Minstrels (visit arranged by Mr. J. Wadsworth), Lieut. W. L. Dunn, Mr. Hamilton Harris, and Mr. Dennis Chapman.

The popularity of the afternoon band concerts in the summer is still to be noted. Both patients and staff are greatly indebted to the Chairman of the Hospitals Sub-Committee (Alderman R. S. Harper), the Chief Constable of Manchester, Lieut. W. L. Dunn, Mr. Dow, and others for having provided such enjoyable entertainment.

The bowling green provides the ideal outdoor recreation for the male patients. Many of the visiting bowling teams have now annual fixtures with us. The Chairman and Councillor Meachin are particularly kind in providing strong teams. An indoor bowling rink has been provided to augment the recreational facilities during the winter months.

The special arrangements for the patients at Christmas and the New Year were much appreciated by them. The extra labour that arises was cheerfully borne by all members of the staff, and it is felt that official recognition should be accorded to the Nurses' Concert Party, who not only gave their annual performance but also gave a series of concerts in the wards on Christmas Day.

Meetings.

The Annual Summer Meeting of the North-Western Tuberculosis Society was held at the sanatorium in June.

During the Annual Meeting of the British Medical Association in Manchester, the opportunity was taken by many members to pay a visit to the sanatorium.

Staff.

The number of nurses passing in Part I. or Part II. of the examination for the Certificate of the Tuberculosis Association was fourteen.

It is to be noted that there are fewer changes in the personnel of the Nursing Staff during the last two years.

In conclusion, I wish to express my thanks to all members of the staff for the loyal and willing manner in which their duties have been carried out.

ABERGELE SANATORIUM.

During the year ended December 31st, 1929, 138 patients were admitted and 138 were discharged. In addition, 1 child with non-pulmonary tuberculosis was admitted to Pen-y-Coed Bungalow and 1 child was discharged—a case of tuberculosis of the spine. In the discharged surgical case, whilst the local condition was greatly improved, it was deemed expedient to remove the patient owing to suspected intestinal tuberculosis.

Table 1 shows a classification according to age and sex of the cases under treatment :—

Age	Males		Females	
	Admitted	Discharged	Admitted	Discharged
0 to 4	1	..	..	..
5 ,, 14	..	..	..	1
15 ,, 24	34	33	9	9
25 ,, 34	36	36	8	9
35 ,, 44	24	23	3	2
45 ,, 64	24	26	..	..
65 and over	..	..	..	..
Total	119	118	20	21

Table 2 shows a classification of the immediate results of treatment in the discharged pulmonary cases, grouped according to the classification of the Ministry of Health in Memorandum 37 T.

(*a*) Patients in whose sputum tubercle bacilli were not found :—

Condition at Time of Discharge	Duration of Residential Treatment in the Institution								
	Under 3 months		3—6 months		6—12 months		Over 12 months		Total
	M.	F.	M.	F.	M.	F.	M.	F.	
Quiescent	4	..	7	2	..	1	..	..	14
Improved	13	1	13	2	9	..	3	..	41
No improvement	..	..	..	..	..	..	..	..	..

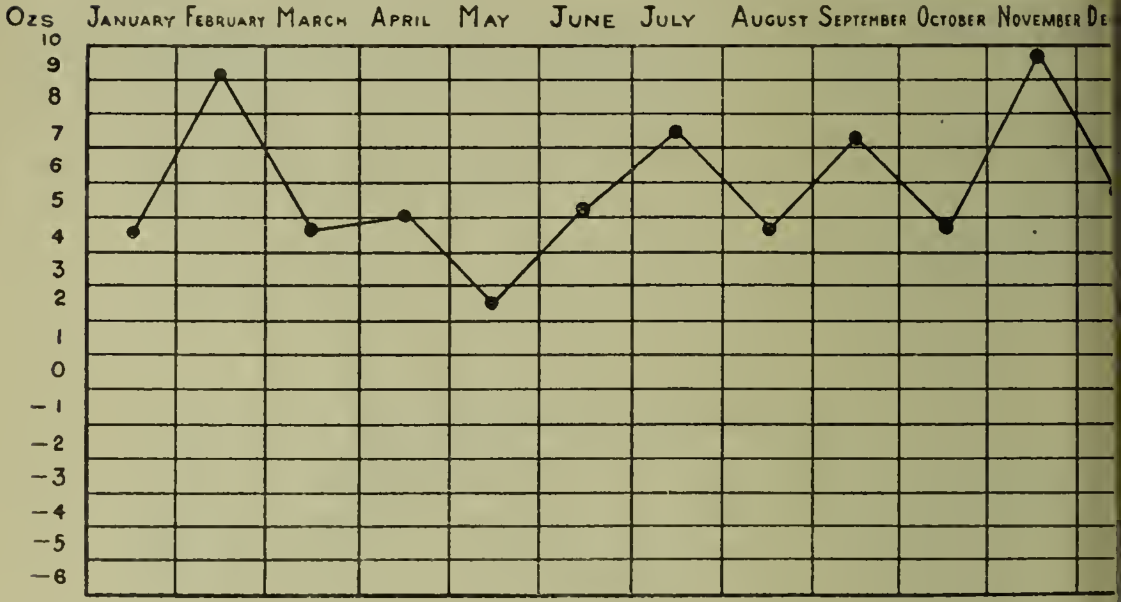
(*b*) Patients in whose sputum tubercle bacilli were found :—

Condition at Time of Discharge	Duration of Residential Treatment in the Institution								
	Under 3 months		3—6 months		6—12 months		Over 12 months		Total
	M.	F.	M.	F.	M.	F.	M.	F.	
Group 1.									
Quiescent	1	..	2	3	1	..	2	..	9
Improved	8	1	1	1	2	1	..	..	14
No improvement	1	..	..	1	..	..	..	..	2
Group 2.									
Quiescent	..	..	..	..	..	..	..	..	..
Improved	14	1	7	..	13	2	3	1	41
No improvement	4	1	1	..	..	..	..	..	6
Group 3.									
Quiescent	..	..	..	..	..	..	..	..	..
Improved	2	..	..	..	..	..	..	..	2
No improvement	2	..	2	1	1	1	..	..	7

One case was considered not to be tuberculous and was discharged after a period of observation. One patient left against medical advice and before the disease could be diagnosed.

Of the discharged patients 126 gained in weight, the average gain being 9lbs. 14oz. ; 3 lost in weight, with an average loss of 2lbs. 13oz. ; 1 remained stationary ; while 8 were not weighed.

The following chart shows the average weekly gains per month throughout the year. It corresponds closely to that of the previous years—in which the weight records were lowest in May.



The general routine of treatment was based on the same principles as in former years. The earlier type of cases do well and benefit by the graduated walks over the hilly country, which produce a deeper and freer breathing. Those with more extensive disease are unfitted for the strain imposed by the steep gradients and make a less satisfactory response to treatment.

Employment for patients was on the same lines as mentioned in last year's report.

A large amount of stone was broken for the purpose of road repairing.

The mercury vapour lamp was extensively used in the treatment of children with surgical tuberculosis.

Estate.

Afforestation was further developed, and during the year 30,000 pines were planted. 5,000 pines were transplanted from the nurseries to the woods and 5,000 seedlings were planted in the nurseries.

MONSALL HOSPITAL.

REPORT BY D. SAGE SUTHERLAND, M.D., MEDICAL SUPERINTENDENT.

At the beginning of the year 1929 there were 439 patients remaining in hospital. During the year 3,644 were admitted, making a total of 4,083 under treatment. Of these cases 3,448 were discharged, 177 died, and 458 remained in hospital at the end of the year. The admissions showed an increase of 89 on the previous year.

The number of admissions from all diseases was greatest in the month of October. The total for the month was 436. The greatest number resident on any one day was 522 on the 29th November, and the smallest, 317, on the 13th July. The average daily number of patients in hospital was 393·7, as against 395·7 in 1928.

The average duration of residence of cases discharged was 41·7 days, as against 40·1 days in the previous year. Excluding cases of Parkinsonism following encephalitis lethargica and cases of malnutrition and rickets, for which a more lengthy period of residence was desirable, the average stay in hospital was 41·01 days.

The fatality rate for all cases was 4·89 per cent., as against 4·54 per cent. in 1928.

The diagnosis of the medical attendant was revised in 305 cases, or 8·4 per cent. on all admissions.

SCARLET FEVER.

At the beginning of the year 240 cases remained in hospital, and during the year 1,898 were admitted, as against 1,708 in 1928, showing an increase of 190. 1,859 were discharged and there were 14 deaths, giving a death-rate of 0·74 per cent., as against 0·77 per cent. during 1928.

The average stay in hospital of cases which recovered was 41·95 days, as against 43·14 days in the previous year, and of fatal cases 14·42 days.

The disease continues to be of a mild nature. Cases of scarlatina anginosa are increasingly unusual, while malignant scarlet fever has been a very exceptional occurrence, one case only being admitted during the year.

The administration of anti-scarlatinal serum has been continued in all but the mild type of case. It has been administered subcutaneously into the muscle, except in attacks of a toxic nature, where direct injection into the veins has been desirable.

The administration of anti-scarlatinal serum, while markedly reducing toxæmia during the acute period of the disease, has only to a slight degree lessened the incidence of septic complications.

Among the 1,873 cases under review, 534 complications were noted.

There were 186 cases of otitis media under the care of the visiting ear surgeons. This complication occurred in 9·93 per cent. of cases. Several patients, who had been isolated at home, have at a later period required admission to hospital for operation following middle ear disease. This condition in some cases might have been prevented by early removal to hospital during the acute period of the illness.

Rhinorrhœa was noted in 12·16 per cent. of cases; kidney complications occurred in 6·25 per cent. of cases; and glandular enlargement in 3·3 per cent. of cases.

From the survey of the incidence of complications and comparison with the figures of the previous years, during which serum was used only to a very small extent, it would appear that the most marked reduction in complications has been in the occurrence of adenitis, glandular disease, and nephritis, while rhinorrhœa and otorrhœa show little alteration.

In view of these observations, a word of caution is necessary, as the tendency in some quarters to regard scarlet fever at the present time as of so slight a nature that home treatment might with equal or greater success be substituted. Apart from the varying and lengthy period of infectivity, the disease even in its mildest manifestations is still uncertain both as regards its benign course and its uninterrupted convalescence. Many unforeseen unhealthy conditions of throat and nose, including enlarged tonsils, may increase the liability to septic complications, even in the mildest type of illness. Septic infection of the middle ear, with possible bone involvement, still requires an extended period of specialist treatment, during which operation may become suddenly necessary. The pathogenic effects of the hæmolytic streptococcus are as varied and generally more acute than those of the tubercle bacillus. To secure the best results in scarlet fever each case requires individual investigation and special nursing, which can best be carried out in hospital. The low death-rate of the disease has to some extent been due to the increased knowledge and improved methods of investigation and treatment, and should not be regarded as an indication for the discontinuance of hospital treatment in this disease.

The occurrence of cross infection resulting in post-diphtheritic scarlet fever has been reduced to a negligible factor. This has been secured by the assistance of the information gained by the systematic and routine performance of the Dick and Schick test in all cases on admission. The control of infection has been secured by the passive immunization of contacts and by the active immunization of all the more doubtful type of scarlet fever. Furthermore, the earlier administration of anti-scarlet fever serum on the occurrence of a case of scarlet fever in hospital has made it possible to cut short the illness at the outset.

During the year active immunization against scarlet fever in Dick positive reactors convalescing from diphtheria has been carried out with uniformly satisfactory results.

Of 449 cases of diphtheria found to be susceptible to scarlet fever, 333 (*i.e.*, 74·16 per cent.) were immunized.

The age-incidence of susceptibles, and the dosage employed, is shown in the following tables :—

ACTIVE IMMUNIZATION AGAINST SCARLET FEVER IN DICK POSITIVE REACTORS ADMITTED TO HOSPITAL SUFFERING FROM DIPHTHERIA.

Age Group	Total Tested	Dick +	Dick—	Immunized	Percentage Positive
0— 5 years	253	173	80	127	68·38
5—10 ,, ...	351	215	136	165	61·25
10—15 ,, ...	94	37	57	25	39·36
15—20 ,, ...	51	11	40	10	21·57
20 + ,, ...	46	13	33	6	28·26
Total	795	449	346	333	56·48

Routine dosage employed :—

(1) 500 s.t.d.*
(2) 2,000 ,, At intervals of 4 to 7 days.
(3) 5,000 ,,

Total .. 7,500 s.t.d. A Dick test was then performed 4 to 7 days after the third dose.

Total number of cases in which active immunization was attempted—333.

Number of Dick +ve converted to Dick —ve reactors by a total dosage of 7,500 s.t.d. : 218 = 65·47 per cent.

Cases requiring less than 7,500 s.t.d. to render them Dick —ve—

500 s.t.d.	2,500 s.t.d.	3,000 s.t.d.	4,000 s.t.d.	5,000 s.t.d.
8	4	7	2	5

* Skin test doses.

Total 26 = 7.81 per cent.

Cases requiring more than 7,500 s.t.d. to render them Dick —ve.—

8,000 s.t.d.	8,500 s.t.d.	9,500 s.t.d.	13,000 s.t.d.	17,500 s.t.d.	20,000 s.t.d.	32,500 s.t.d.	57,500 s.t.d.
9	9	1	4	20	1	2	1

Total 47 = 14.11 per cent.

No. of cases not retested after a course of immunization—16.

No. of cases discharged still Dick +ve after re-test—

After	2,500 s.t.d. ..	1	
,,	5,500 ,, ..	2	
,,	7,500 ,, ..	18	
,,	15,500 ,, ..	1	(Still Dick +ve 4 weeks after final dose of 7,500 s.t.d.)
,,	17,500 ,, ..	3	(One Dick +ve 7 days after final dose of 10,000 s.t.d.) (One Dick +ve 9 days after final dose of 10,000 s.t.d.) (The other Dick +ve after 7,500 s.t.d., given 10,000 s.t.d. and not re-tested.)
,,	18,000 ,, ..	1	(Faint Dick +ve 12 days after final dose of 10,000 s.t.d.)

Aural Report.

Among all cases admitted to hospital during the year, otorrhœa as a complication occurred in 251 instances. Of this number 4 occurred as a complication in erysipelas, 49 in diphtheria, 12 in measles, and 186 in scarlet fever. The total number of cases of scarlet fever being 1,873, the incidence of otorrhœa in this disease is therefore 9·93 per cent.

Of the cases which developed otorrhœa, 33 had received scarlet fever antitoxin on admission.

One hundred and twenty-three cases were admitted to the Aural Ward for treatment.

A mastoid operation was necessary in 15 cases (7 single, 8 double); 4 of these cases were serum treated. Paracentesis was performed in 2 cases.

The average day of onset of otorrhœa in the serum treated group was the 19th, and in the non-serum treated group the 18th. The average duration of otorrhœa was 31 days.

Two deaths occurred, one due to intercurrent disease (pneumococcal empyema), the other to streptococcal meningitis following mastoidectomy.

Scarlet Fever Return Cases.

The number of reputed return cases for the year 1929 was 70. The number of cases of scarlet fever discharged during the year being 1,859, the crude return case rate is therefore 3·7 per cent.

On analysis of the series of 70, 3 were discounted on the grounds that the interval elapsing between the discharge of the primary case and the onset of the symptoms in the secondary case did not fall between 1 and 28 days. In addition, the diagnosis of scarlet fever was not upheld in 7 secondary cases —3 of these cases, nursed in the Bed Isolation Ward, were Dick positive on admission and on re-test 3 weeks later, and were actively immunized against scarlet fever prior to discharge. The other 4 cases were Dick negative on admission, and showed no evidence of scarlet fever during their stay in hospital. Seven other reputed return cases were not admitted to hospital, and the diagnosis of scarlet fever could not be verified or disputed. Deleting these, the revised return case rate is 3·2 per cent., as compared with a rate of 2·8 per cent. for the preceding year.

The stay in hospital of the infecting cases varied between the limits of 25 and 91 days, the average being 46 days. The number of days elapsing between the discharge of the infecting case and the onset of the disease in the secondary case varied between 2 and 26 days, the average being 11 days.

One infecting case gave rise to four return cases; two, to three; six, to two; the remainder being each responsible for one case.

Too early discharge from hospital cannot be accepted as a satisfactory explanation of the occurrence of return cases, the average stay in hospital of the infecting cases being 46 days, as opposed to 42 days for all cases of scarlet fever.

The routine administration of anti-scarlet fever serum to all cases has been recommended by some clinicians as likely to shorten the period of infectivity and reduce the return case rate. Our procedure has been to reserve its use for the more severe type of case, and I am opposed to its indiscriminate use, both on the grounds of expense and the undesirability of sensitizing a large number of patients to horse serum. Moreover, of the 60 cases responsible for return cases, no fewer than 16 were serum treated.

Approximately 500 cases of scarlet fever were treated with serum during the year. The return case rate for this serum treated group is 3·2 days, exactly comparable to the rate for non-serum treated cases.

The condition, either noted in hospital or developing after discharge, which apparently was responsible for the transmission of infection was—

Rhinorrhœa	16 cases.
Otorrhœa	3 ,,
Skin affections (especially those affecting the nose)	10 ,,
Secondary tonsillitis	1 ,,
Cervical adenitis	2 ,,

Conservative methods of treatment were applied throughout the year, and operative interference with a view to preventing return cases was not practised. The results were on the whole satisfactory, but might be improved if more beds were available for the open-air treatment of cases likely to prove infective.

DIPHTHERIA.

The number of patients admitted was 707, as against 964 in 1928, showing a decrease of 257. There were 660 discharges and 50 deaths. Seventeen deaths occurred within 48 hours of admission. The fatality-rate is 7·03 per cent., as against 7·17 per cent. in 1928. Excluding deaths occurring within 48 hours after admission, the fatality-rate is 4·76. The average stay in hospital for patients who recovered was 53·12 days. and for fatal cases 9·7 days. One hundred and sixteen cases certified as diphtheria were found to be suffering from diseases other than that certified. Of these 6 were fatal.

The operation of tracheotomy was performed in 44 cases of laryngeal obstruction. Sixteen cases proved fatal, giving a mortality-rate of 36·3 per cent., which is the lowest recorded during recent years.

From a survey of the diphtheria deaths during the year it would appear that nearly half of these fatal cases have been admitted after the fifth day of disease. As the date of the commencement of the illness has to be determined from the mother's statement of the invasive symptoms, the onset being frequently of an insidious nature, it is probable that the proportion of cases admitted late in the disease is greater than stated. In the interests of the patient it is important again to emphasise the need of the early summoning of medical help and the earliest possible diagnosis of diphtheria and immediate treatment by anti-toxin.

While the number of admissions is lower than in the previous year, cases of a severer type have been more frequent.

The manufacture of anti-diphtheritic serum in more concentrated form has facilitated its use on a larger scale by intravenous administration, and in all the severer type of attack, including late cases, resort to this method of administration has been adopted with remarkably favourable results.

In the majority of cases anti-diphtheritic serum has been administered by the intramuscular route. The tendency has been to increase the dosage, with beneficial results. Post-diphtheritic paralysis has been definitely infrequent, even in the severer type of case. Under previous methods of treatment some form of paralysis was not an uncommon sequela.

Forty-two per cent. of patients admitted suffering from scarlet fever were found by the Schick test to be susceptible to diphtheria, and sanction was granted by the parents in a large proportion of these cases to have the children protected by immunization during their convalescent period in hospital.

During the year 480 patients of varying age groups, as shown in the table below, were actively immunized by the administration of toxoid antitoxin. Reactions were uncommon and of slight nature, and were entirely absent in the younger age groups.

The period in hospital was too short to check the results by a negative Dick test, but this has been carried out after return to their homes. Up to the present time no patient immunized has been readmitted suffering from the disease against which protection was carried out.

ACTIVE IMMUNIZATION AGAINST DIPHTHERIA IN SCHICK POSITIVE REACTORS ADMITTED TO HOSPITAL SUFFERING FROM SCARLET FEVER.

Age Group	Total Tested	Schick +	Schick —	Immunized	Percentage Positive
0— 5 years	407	230	177	137	56·5
5—10 ,, ...	848	371	477	231	43·7
10—15 ,, ...	312	114	198	70	36·5
15—20 ,, ...	158	40	118	23	25·3
20 + ,, ...	155	36	119	19	23·2
Total	1,880	791	1,089	480	42·1

TRACHEOTOMY REPORT.

There were 44 tracheotomies performed on cases of laryngeal diphtheria during the year, and of this number 16 died. This gives a mortality rate of 36·3 per cent., which compares favourably with preceding years, as the appended table shows :—

Year	Number of patients on whom Tracheotomy was Performed	Deaths	Mortality Rate per cent.
1925	36	16	44·4
1926	45	21	46·6
1927	43	17	39·5
1928	37	19	51·3
1929	44	16	36·3

Of the 44 cases under consideration 32 suffered from faucial diphtheria in addition, of whom 11 died, while 12 cases were simple laryngeal diphtheria, 5 fatal cases being recorded.

A table is here appended showing the mortality per age group.

Age	Number of patients on whom Tracheotomy was Performed	Deaths	Mortality Rate per cent.
Under 1	4	3	75
1—2	9	5	55·5
2—3	11	6	54·5
3—4	5	0	0
4—5	8	2	25
5—10	6	0	0
12	1	0	0
Total	44	16	36·3

ENTERIC FEVER.

In hospital at commencement of year	6
Admitted during year	37
Incorrectly diagnosed	12
Remaining in hospital at end of year	2
Under treatment	31 (14 males, 17 females).
Discharged	26
Died	3
Fatality-rate	10·3 per cent.
Average day of disease on admission	13·9
Average stay in hospital—Discharges	47·2 days.
,, ,, ,, Deaths	23·3 ,,
Average age of patients	25·4 years.

Other diseases admitted as enteric fever:—

	Recovered.	Died.
Broncho-pneumonia	2	—
Lobar pneumonia	—	1
Acute pleurisy	2	—
Ulcerative endocarditis	—	1
Intestinal obstruction..	1	—
Septic meningitis and acute endocarditis..	—	1
Tuberculous meningitis	—	2
Enteritis	1	—
Pyrexia (of unknown origin)	1	—
	7	5

The type of disease was as follows:—

Typhoid	22
Paratyphoid B	9

The complications were:—

Hæmorrhage	1
Broncho-pneumonia	2
Relapse	1
Thrombosis	1
Lymphangitis	1
Albuminuria	4
Furunculosis	2
Otorrhœa	1

In the three fatal cases the cause of death was, respectively: (1) relapse, (2) broncho-pneumonia, (3) toxæmia.

It is noteworthy that no fewer than 16 cases of enteric fever were sent in from general hospitals. Of these nine were patients who had been admitted for treatment, diagnosed for the most part as pneumonia or some surgical abdominal condition. From these cases six members of the hospital nursing or domestic staff and one medical student contracted the infection: in one nurse the disease had a fatal termination.

ERYSIPELAS.

One hundred and ninety-three cases were admitted, an increase of 24 on the previous year, and 180 cases were discharged. There were 16 deaths, giving a mortality rate of 8·16 per cent., as against 6·5 per cent. in the previous year.

The high death-rate in erysipelas is largely due to the fact that the admissions have been largely among elderly and debilitated persons, whose resistance is low.

There were 30 cases notified as erysipelas in which the original diagnosis had to be amended. The following is a list of the conditions in which alteration of the notified diagnosis had to be made:—

Ulcer, leg	1
Septic toe	1
Acute cellulitis	8
Eczema	6
Pustular dermatitis	1
Urticaria	1
Lymphangitis and lymphadenitis	2
Erythema	2
Acute mastitis	1
Vulvitis	1
Alveolar abscess	2
Bursitis	1
Cavernous sinus thrombosis	2
Nephritis and cellulitis	1

The serum treatment of all true cases of erysipelas was continued and the results were very satisfactory. A special anti-erysipelas serum was tested, but it was not found to give appreciably better results than those already being obtained from the use of scarlet fever antitoxic serum in full doses, and its use was discontinued on account of its greater cost.

MEASLES.

One hundred and forty-six cases were admitted and 113 were discharged. Ten deaths occurred, giving a fatality rate of 8·13 per cent. Six of the ten fatal cases were complicated by broncho-pneumonia.

PUERPERAL FEVER.

The number of admissions was 159, as against 154 in the previous year, showing an increase of 5. One hundred and fifty were discharged cured and 16 deaths occurred, giving a case mortality of 9·6 per cent., as against 13·9 per cent. during the previous year. Two deaths occurred within 48 hours of admission.

The average stay in hospital of those who recovered was 36·5 days, and of fatal cases 15 days.

The average day of disease on admission to hospital was the seventh.

Ninety infants were admitted with mother, of whom 4 died, and the duration of stay in hospital of the remainder was 32·2 days.

OTHER INFECTIOUS DISEASES.

The following table gives the admissions of other infectious diseases during the year :—

Pemphigus..	1
Encephalitis lethargica	17
Rubella	12
Whooping cough	52
Chickenpox	23
Epidemic cerebro-spinal fever	4
Poliomyelitis (acute)	2

CRÈCHE (MALNUTRITION AND RICKETS).

The 8 cots of the Crèche were fully occupied throughout the year. There were 15 admissions and 14 discharges. One death occurred.

Table showing Numbers of Various Diseases Treated.

Disease	Remaining in Hospital, Jan. 1st, 1929	Admitted	Discharges and Deaths	Remaining in Hospital Dec. 31st, 1929
Scarlatina	240	1,898	1,873	265
Diphtheria	119	707	710	116
Enteric Fever	6	26	29	3
Erysipelas	21	193	196	18
Puerperal Fever	17	159	166	10
Measles	1	146	123	24
Other Diseases	35	515	528	22
Total	439	3,644	3,625	458

TOTAL DIPHTHERIA CASES—710.

Age Incidence	Number	Percentage
0 to 5 years	226	31·8
5 ,, 10 ,, ...	313	44·1
10 ,, 15 ,, ...	84	11·8
15 ,, 20 ,, ...	45	6·4
20 + ...	42	5·9

TOTAL SCARLET FEVER CASES—1,873.

Age Incidence	Number	Percentage
0 to 5 years	405	21·6
5 ,, 10 ,, ...	846	45·2
10 ,, 15 ,, ...	311	16·6
15 ,, 20 ,, ...	157	8·4
20 + ...	154	8·2

COMPLICATIONS IN DIPHTHERIA.

Complication	Number	Percentage
Otitis Media	4	·56
Palatal Paresis	25	3·52
Pharyngeal Paralysis	4	·56
Cardiac Arrythmia	4	·56
Severe Albuminuria or Nephritis	102	14·37
Otorrhœa	40	5·63
Strabismus	8	1·13
Cycloplegia	2	·28

COMPLICATIONS IN SCARLET FEVER.

Complication	Number	Percentage
Rhinorrhœa in Convalescence	226	12·16
Otorrhœa	186	9·93
Nephritis	10	·54
Albuminuria in Convalescence	107	5·75
Adenitis and Abscess	3	·16
Endocarditis	2	·11

COMPLICATIONS IN MEASLES.

Complication	Recovered	Died
Broncho-pneumonia	19	6
Laryngitis	1	
Otorrhœa	8	..
Impetigo	6	..
Albuminuria	3	..
Bronchitis	1	..

OTHER DISEASES ADMITTED AS ENCEPHALITIS LETHARGICA,

	Recovered	Died
Tuberculous Meningitis	..	2
Acute Intestinal Obstruction	1	..
Cerebral Tumour	..	1
	1	3

POST-MORTEM EXAMINATIONS.

During the year 1929 post-mortem examinations have been carried out on fatal cases of special interest.

The following are the particulars relating to each autopsy with the exception of fatal cases of puerperal fever, which are discussed in the report under that heading :—

Disease Notified	Post-mortem Findings	Number of Cases
Laryngeal Diphtheria	Laryngeal Diphtheria	2
Laryngeal Diphtheria	Retropharyngeal Abscess and Broncho-pneumonia	2
Faucial Diphtheria	Faucial Diphtheria	2
Typhoid Fever	Right Lobar Pneumonia	1
Typhoid Fever	Typhoid Fever	2
Typhoid Fever	Malignant Endocarditis	1
Erysipelas..	Erysipelas, following Appendicectomy	1
Erysipelas..	Acute Nephritis	1
Meningitis..	Tuberculous Meningitis	3
Scarlet Fever	Scarlet Fever and Intussusception..	1
Meningitis..	Left Tempero-sphenoidal Abscess ..	1
Meningitis..	Pneumococcal Meningitis	1
Meningitis..	Acute Encephalitis	1
Erysipelas..	Cavernous Sinus Thrombosis	1
Encephalitis Lethargica ..	Glioma of Anterior Genu of Corpus Callosum	1

LABORATORY REPORT.

The total number of swabs of throat, nose, and ear from which cultures were made and microscopically examined during the year was 17,256. This number, being to a large extent dependent on the number of admissions to hospital, varies little from year to year, as does also the percentage of swabs from which the Klebs Lœffler bacillus is cultivated.

Source of Culture	Negative	Positive	Total
Throat	7,602	613	8,215
Nose	7,932	486	8,418
Right ear	279	59	338
Left ear	251	34	285
	16,064	1,192	17,256

In other bacteriological work there has been a decided increase in the number of examinations, ranging from an increase of over 100 per cent. in the case of agglutination reactions to over 300 per cent. increase in the examination of fæces.

The Puerperal Fever Ward still entails a great amount of laboratory work, as the figures in the puerperal fever section show.

On all cases of suspect septicæmia in hospital, blood cultures are carried out, while advantage is taken of the better equipment for the chemical examination of urine in all cases where a quantitative examination is desired.

The appended table shows the number of various specimens examined:—

Bacteriological Examinations.

Fæces	274
Urine	194
Cerebro-spinal fluid	53
Pus	14
Pleural effusions	6
Blood cultures (other than puerperal fever cases)	12
Sputa	30

In addition, complete chemical analysis was carried out on 6 specimens of urine, and 8 specimens were examined microscopically.

A differential blood count was performed in 5 instances, and of 127 smears examined microscopically 88 were taken from the throat, 23 were vaginal, 4 from male urethra, and 12 from conjuctiva.

Vaccines were prepared for 7 cases during the year.

REPORT OF CASES TREATED IN THE BED ISOLATION WARD.

Nature of Cases	No. of Cases
Scarlet Fever—Diagnosis confirmed	46
,, ,, Diagnosis not confirmed	64
,, ,, and Laryngeal Diphtheria	2
,, ,, and Diphtheria	27
,, ,, and Diphtheritic Rhinitis	19
,, ,, and Diphtheritic Otorrhœa	8
,, ,, and Whooping Cough (late)	6
,, ,, and Tinea	2
,, ,, and Scabies	5
,, ,, and Impetigo	10
,, ,, and Pemphigus	1
,, ,, and Pleural Effusion or Empyema	3
,, ,, and Pneumonia	1
,, ,, and Vaginal Discharge	8
,, ,, and Measles (late)	3
,, ,, and Rubella	2
,, ,, and Enteritis	3
,, ,, and Otorrhœa	9
,, ,, and Mumps	1
,, ,, and Surgical Wounds	3
,, ,, and Persistent Rhinorrhœa	7
Diphtheria—Diagnosis confirmed	11
,, Diagnosis not confirmed	14
,, Diagnosis amended to Scarlet Fever	5
,, Observation for Rash or Desquamation	8
,, and Scabies	1
,, and Impetigo	2
,, and Enteritis	9
,, and Whooping Cough (late)	1
,, and Rubella	1
,, and Measles (late)	6
,, and Pneumonia	1
,, and Gonorrhœa	1
,, and Vaginal Discharge	3
,, Carrier	1
Tonsillitis and Quinsy	6
Pneumonia following Measles	9
Mumps	5
Carried forward	314

CASES TREATED IN THE BED ISOLATION WARD—continued

Nature of Cases	No. of Cases
Brought forward	314
Measles (late)	11
Pneumonia and Bronchitis	5
Cellulitis	1
Measles (late) with Scabies	1
Rubella	15
Whooping Cough (late)	2
Rickets, Whooping Cough, and Broncho-Pneumonia	1
Erythema Multiforme	1
Intestinal Rash	1
Meningitis	1
Pemphigus	1
Chorea and Drug Rash	1
Total cases	355

Cases of Cross Infection.

Diphtheria contracted measles	1
Quinsy contracted scarlet fever	1

Reference to the above table of cases admitted to the Bed Isolation Ward shows that a wide diversity of illness has been dealt with during the past year, and, on the whole, with results which are satisfactory.

The "barrier" equipment in use for bed pan sterilization was found inadequate to deal with a small outbreak of dysenteric diarrhœa, and it was considered advisable to close the ward for a period, from the 25th February to the 8th March. On the 9th March the ward was reopened and the normal work resumed.

It is acknowledged that certain diseases, in which the infecting agent, whether organism or virus, is air-borne, such as measles, whooping cough, or chickenpox, cannot be "barriered" despite the most rigorous regime; for this reason, if a case is admitted to a ward suffering from some other infectious illness, but is, at the same time, incubating one of these air-borne diseases, cross infection is almost certain to ensue after the latter disease has manifested itself. This would account for the case of measles which has been recorded.

The occurrence of cross infection in the past year may be explained by the large number of cases that have been dealt with, a total of 355. As there are only 32 beds available at any one time, the ward has been occupied to the maximum capacity. In bed isolation nursing this is undesirable, for it means that the nursing staff may be unable to carry out the strict routine as laid down. In addition, a full ward entails the closer approximation of patients, and this tends to increase the risk of cross infection. As the variety of infectious diseases treated in hospital increases, the total accommodation remaining the same, the need for an increase of bed isolation beds becomes necessary.

ILLNESS OF NURSING STAFF NECESSITATING WARD TREATMENT DURING 1929.

Condition	Number of Cases	Days Warded
Infectious diseases—		
Diphtheria	2	58
Scarlet fever	1	5 (+ 30 in 1930)
Measles	1	15
Rubella	4	41
Mumps	3	49
Ear, nose, and throat conditions—		
Tonsilitis and quinsy	30	358
Laryngitis..	2	14
Otitis media	1	48
Otalgia	1	8
Naso-pharyngeal catarrh and common cold	5	53
Sinusitis	2	55
Chest conditions—		
Influenza	13	154
Bronchitis..	3	33
? Phthisis	1	23
Skin diseases—		
Scabies	1	49
Herpes zoster	1	12
Pemphigus	1	7
Eye diseases—		
Conjunctivitis	1	12
Corneal Ulcer	1	11
Rheumatism	6	125
Mastitis	2	34
Axillary abscess	1	22
Carbuncle	1	5
Cellulitis	2	13
Lymphangitis	1	8
Parotitis	1	16
Diarrhœa	1	6
Gastritis	2	17
Admitted for observation	4	15
Surgical operations—		
Appendicectomy	3	77
Empyema (pneumococcal)	1	80
Perinephric abscess	1	39
Tonsillectomy	2	49
Denker's operation on maxillary sinus	1	23
Total	103	1,534

PUERPERAL FEVER REPORT.

The series of cases for consideration comprises the discharges from the Puerperal Fever Ward during the year, together with the fatal cases. On the 1st January, 1929, there remained 17 patients in the ward, all of whom are included in this report, and during the year 167 patients were admitted, 10 of whom were remaining in hospital at the end of the year. The present report is therefore based on a series of 174 cases. Of this number, 8 cases require particular note in that they were not true puerperal infections, and will be considered separately. Seven of these had a fatal termination and 1 case recovered. These 8 cases were :—

Case H/MN. Multipara. Aged 33. Admitted 22–9–28 from another hospital as a septic abortion and peritonitis. Diagnosed as a ruptured ectopic gestation, which was confirmed by laparotomy. Developed a left parametritis on 28–12–28, and laparotomy was again performed, when an adherent and inflamed left tube and ovary were removed. The patient made an excellent recovery, and when last seen, September, 1929, was in good health. She was discharged on 26–1–29.

Case 1051. Multipara. Aged 25. Admitted 12–2–29 after normal labour. No evidence of puerperal sepsis. Suffering from pertussis and broncho-pneumonia. Death 22–2–29.

Case 1054. Multipara. Aged 30. Admitted 18–2–29, seven days after delivery of a still-born child, and found to be suffering from eclampsia. Death 23–2–29. Post-mortem examination.

Case 1140. Admitted 26–8–29, two hours after confinement, and found to be suffering from eclampsia. Death four hours after admission.

Case 1148. Multipara. Aged 36. Admitted 6–9–29, following normal confinement 29–8–29. No evidence of puerperal sepsis, but had several eclamptic fits while in hospital. Death 4–10–29. Post-mortem examination revealed chronic nephritis and endocarditis.

Case 1173. Multipara. Aged 42. Admitted 28–10–29, two days after a normal confinement, and found to be suffering from pulmonary tuberculosis and peritonitis. Death 29–10–29. A post-mortem examination revealed tuberculous peritonitis and pulmonary tuberculosis.

Case 1177. Primipara. Aged 29. Admitted 4–11–29, following forceps delivery 29–10–29. No evidence of puerperal sepsis, but suffering from chronic bronchitis with mitral incompetence. Death 5–11–29.

Case 1195. Multipara. Aged 30. Admitted 5–12–29 from another hospital after forceps delivery 24–11–29. Advanced pernicious anæmia, for which she had been under treatment for previous 6 years. Severe lacerations of vagina and perineum, but wounds healthy and granulating and no evidence of infection. Death 10–12–29.

In none of the above cases could the cause of death be attributed to a puerperal infection, although in at least 4 of the cases actual parturition, with its heavy demands on the constitution, accelerated death. This reduces the series of cases to 166 true puerperal infections, and of these 16 died, giving a mortality rate of 9·6 per cent., which is lower than that of any previously recorded year.

The year 1929 shows an increase in the number of cases admitted. The figures for the last 5 years are as follows :—

	Admitted	Case Mortality
1925	144	15·2 per cent.
1926	159	19·0 ,,
1927	119	10·1 ,,
1928	154	13·9 ,,
1929	167	9·6 ,,

The lower death rate may perhaps be ascribed to the more successful treatment of cases of septicæmia, which is discussed at length later in this report. Since the incidence of puerperal infection appears to be no higher than in previous years, the increase in the number of admissions to hospital is gratifying, implying as it does that the facilities for the special treatment of this class of case are becoming more recognised by the general practitioner.

The average day of disease on admission to hospital continues to be rather late, the figure this year being the seventh day of disease. A reduction has been made in the average length of stay of a patient in hospital, being 36·5 days for 1929, as against 43·6 days for the preceding year. The number of days in hospital for fatal cases averaged 15, and 2 of the fatal cases died within 48 hours of admission.

Of the 166 cases, 133 were cases of puerperal infection following full term, or not less then 8 month pregnancies ; the remainder, 33 cases, were septic abortions. They will be considered separately, though the treatment for both is similar. The danger of septic infection from severe perineal, vaginal, and cervical lacerations is absent in septic abortion.

PUERPERAL FEVER—133 CASES.

Complications were present in 68 cases (51 per cent.).

1. *Complications due to Local Spread of Infection.*

Parametritis (14 per cent.)—

Bilateral..	6
Right	12
Left	1

Phlegmasia Alba Dolens (8 per cent.)—

Bilateral..	6
Right	Nil
Left	5
General peritonitis (7 per cent.)	9
Pyosalpinx	1

Complications in this category may precede or be concurrent with complications in Class 2.

2. *Complications due to Blood Infection.*

There were 28 cases of septicæmia (21 per cent.) during the year, 24 of which were treated with intramuscular injections of Metarsenobillon.

Pulmonary embolism	3 (recovered 2)
Pyæmia	2 (recovered 0)
Cerebral embolism	2 (recovered 0)

It is interesting to note that 2 cases of pulmonary embolism recovered, the fatal case No. 1180 (vide infra) being a small infarction, found post-mortem.

Three cases of puerperal insanity occurred, 2 of which recovered and were discharged in good health, the other, a case of acute melancholia, being transferred to Crumpsall Infirmary.

CONSIDERATION OF 33 CASES OF SEPTIC ABORTION.

There were no deaths during the year from cases admitted as septic abortion. The number of cases with complications was 3, all septicæmia.

Appended are details of 16 fatal cases occurring among 166 admission of puerperal fever (including 33 septic abortions).

DEATHS.

Ref. No.	Age	No. of previous Children	Date of Confinement	Date of Onset of Symptoms	Date of Admission	Normal or Difficult Labour	Condition on Admission	Complications	Date of Death
1039	24	Nil	29–12–28	5–1–29	8–1–29	Forceps	Slight cervical laceration. Some bruising, vaginal walls. Small perineal tear, with tendency to slough	General peritonitis and posterior colpotomy, 10–1–29. Broncho-pneumonia, 13–1–29	15–1–29
1043	23	2	19–1–29	22–1–29	24–1–29	Normal	Patient extremely ill. T. 103·8. P. 152. R. 40. General peritonitis	General peritonitis (on admission). Laparotomy and posterior colpotomy, 24–1–29. Broncho-pneumonia, 26–1–29	31–1–29
1055	22	Nil	16–2–29	17–2–29	19–2–29	Instruments	Extremely ill. Cervix moderately lacerated. Vaginal bruising and small perineal tear. General peritonitis	General peritonitis (on admission) ..	20–2–29
1063	30	4	26–2–29	28–2–29	2–3–29	Normal	No marked lacerations to genital tract. Malignant endocarditis	Malignant endocarditis (on admission). R. phlegmasia alba dolens, 13–3–29. L. phlegmasia alba dolens, 18–3–29	9–5–29
1068	27	5	17–3–29	20–3–29	22–3–29	Normal	No cervical laceration. Vagina and perineum intact. Hæmolytic streptococcal septicæmia	Septicæmia, 22–3–29. Cerebral embolism, 1–4–29	5–4–29
1076	21	Nil	7–4–29	9–4–29	10–4–29	Normal	Marked cervical sloughing. Left parametritis	L. parametritis (on admission). R. parametritis, 12–4–29. Left lobar pneumonia, 16–4–29	24–4–29
1117	28	2	22–6–29	26–6–29	28–6–29	Normal	Hæmolytic streptococcal septicæmia..	Septicæmia (on admission)	3–7–29
1119	32	Nil	24–6–29	26–6–29	30–6–29	Normal	Small unsutured perineal tear	Albuminuria, hæmatura. and pyuria, 8–7–29. R. parametritis, 8–7–29. Left pleural effusion, 16–8–29. General peritonitis, 16–8–29	20–8–29
1120	36	3	21–6–29	Patient too ill to supply required information	1–7–29	Normal	No marked cervical or vaginal lacerations. Septicæmia. Patient extremely ill and semi-comatose	Septicæmia (on admission)	3–7–29

DEATHS—*continued.*

Ref. No.	Age	No. of previous Children	Date of Confinement	Date of Onset of Symptoms	Date of Admission	Normal or Difficult Labour	Condition on Admission	Complications	Date of Death
1132	27	Nil	29-7-29	30-7-29	3-8-29	Stillborn. 32 hours in labour	Marked cervical laceration and external sloughing. Extensive "green sloughing" of entire vagina. Severe perineal tear extending to anal border, with severe sloughing	General peritonitis, 5-8-29	8-8-29
1135	29	2	12-8-29	14-8-29	15-8-29	Normal	Small, healthy internal perineal tear. Hæmolytic streptococcal septicæmia	Septicæmia (on admission). Cerebral embolism, 27-8-29	28-8-29
1171	26	Nil	21-10-29	19-10-29	24-10-29	Difficult R.O.A. Macerated fœtus	Patient extremely ill. Severe bruising and sloughing of vagina and sloughing lacerated cervix. Severe laceration and sloughing of post-vaginal wall. Small perineal tear	Septicæmia, 25-10-29. Coccygeal abscess, 3-11-29. Left pyopneumothorax, 8-11-29	10-11-29
1180	37	8	5-11-29	6-11-29	7-11-29	Manual removal of placenta	Cervix moderately lacerated and sloughing. Small tear post-vaginal wall, commencing to slough. Hæmolytic and non-hæmolytic streptococcal septicæmia. T. 104. P. 120. R. 20	Septicæmia (on admission). Small pulmonary infarction—right lower lobe	15-11-29
1190	24	Nil	11-11-29	21-11-29	28-11-29	Normal	Cervix inflamed and unduly lacerated. Drowsy and toxic in appearance. Abdominal tenderness in both fossæ. T. 103·6. P. 112. R. 26. Septicæmia	Septicæmia (on admission). Pyæmia, 30-11-29. Pelvic peritonitis and laparotomy, 30-11-29	1-12-29
1199	31	Nil	4-12-29	4-12-29	9-12-29	Craniotomy	Diarrhœa and incontinence. Tenderness in R. and L. iliac fossa. Patient weak and extremely ill. T. 104. P. 100. R. 40. Hæmolytic streptococcal septicæmia. General peritonitis	Septicæmia (on admission). General peritonitis (on admission)	13-12-29
1203	25	Nil	19-12-29	20-12-29	23-12-29	Forceps delivery. Stillborn child	Double parametritis. Marked cervical laceration and sloughing. Extensive sloughing. Perineal tear	Double parametritis (on admission). General peritonitis	30-12-29

Summary.

Cause of death directly or indirectly due to puerperal sepsis :—

	No. of Cases	
General peritonitis	6	
Septicæmia (2 developed cerebral embolism and 1 developed pulmonary infarct)	6	
Septicæmia with general peritonitis (1 developed pyæmia)	2	
Bilateral parametritis and left lobar pneumonia	1	
Double phlegmasia and malignant endocarditis	1	
	—	16

Normal labours	9	
Instrumental or protracted labours	6	
Manual removal of placenta	1	
	—	16

Primiparæ (average age 25·8 years)	9
Multiparæ (average age 30·0 years)	7

Average age of all deaths .. .. 27·6 years

From a survey of the table it is noted that the most fatal complication is general peritonitis. Out of a total of 9 cases of peritonitis 8 succumbed, despite the fact that laparotomy was performed in 5 instances. The general condition of the remainder did not permit of a general anæsthetic. Two of the cases, in addition, suffered from septicæmia. The case which recovered was a primipara, aged 21 years, on whom a laparotomy was performed at 9-0 p.m. on Christmas Day, 1928, when an early peritonitis was found.

Of the 31 cases of septicæmia (including 3 in septic abortion) 6 deaths occurred—excluding 2 cases complicated with peritonitis—and of those 6 cases, 2 died of cerebral embolism.

The mortality rate from septicæmia is much lower than in the previous twelve months, being 19·3 per cent., as against 42·4 per cent. The treatment adopted for septicæmia is discussed later in the report.

Treatment (General).

It becomes more apparent in dealing with puerperal infections that hard and fast rules regarding treatment cannot be laid down, and each case has to be treated on its own merits. There is, however, one underlying principle in the treatment, and that is the immediate establishment of free and efficient uterine drainage. Good results continue to be obtained with intra-uterine injections of glycerine into the uterus. Iodine is combined with the glycerine as a useful aid in controlling hæmorrhage. In offensive smelling discharges a strong antiseptic such as Glauramine or Monsol may be employed with success.

Intra-uterine injections of glycerine are carried out in the specially equipped theatre and the lacerations are swabbed with glycerine-Glauramine or glycerine-Monsol, and later, tampons of cataplasma kaolini applied.

Patients are nursed in the sitting-up position in bed, and each patient is provided with an air ring and pillows to render support in this position.

During the year many cases have been admitted with infected lacerations of the genital tract of varying severity. These conditions require special consideration. Perineal and vaginal tears are amenable to treatment on general surgical lines.

Even in very extensive vaginal and perineal lacerations early treatment is successful. Cervical lacerations, owing to the facilities for a spread of infection to the uterus, are more prone to give trouble, but here, again, early treatment as indicated gives excellent results.

When the uterus is infected and endometritis is present, frequent intra-uterine lymph drainage is adopted. When the deeper structures are not involved and efficient uterine drainage is established, the spread of infection is definitely checked, and a rapid recovery may be expected.

Cases of parametritis in hospital have all had symptoms of this complication on admission. There is no indication that intra-uterine injection of glycerine in this type of case has anything but a beneficial effect.

Intra-uterine injections should not be carried out in bed, where sterility is difficult to maintain.

TREATMENT OF PUERPERAL SEPTICÆMIA.

Of the 31 cases of septicæmia during the year, 26 were treated with intra-muscular injections of Metarsenobillon on the lines indicated by Leonard Colebrook in Special Report Series No. 119 of the Medical Research Council.

A clinical diagnosis of septicæmia is sufficient justification for commencing a course of Metarsenobillon, despite a negative blood culture.

All patients admitted to the Puerperal Fever Ward have a bacteriological examination of blood carried out within two days of admission. Our method is to use 3 c.c.'s of blood and to add 1 c.c. to 2 c.c.'s, 3 c.c.'s, and 4 c.c.'s of 5 per cent. sterile saline, and from these dilutions blood agar plates are made.

The resultant growth gives some indication of the extent of infection. A mild blood infection which may produce a growth in 10—15 times its amount of broth and yet not yield a growth in blood plates made in the manner stated, is not a serious condition, and many patients recover from such infections without special treatment for septicæmia, provided the source of infection can be effectually controlled.

A septicæmia is not now regarded as a contra-indication to routine theatre intra-uterine injections. It would be futile to treat a septicæmia as a blood infection only and omit to remove the primary source of infection, and it has been the custom to combine intra-muscular injections of Metarsenobillon with lymph drainage of the uterus. The results obtained are decidedly encouraging, and there is little doubt that even heavily infected blood can be rendered sterile under such treatment, as is shown in the following cases :—

Case No. 1153.

A primipara, aged 22, admitted 22–9–29, after a "low forceps" delivery on 13–9–29. There was a perineal tear with four sutures *in situ*, which were removed to promote better drainage, since there was no evidence of the tear uniting.

A blood culture on the day following admission showed an infection with hæmolytic streptococci (48 per c.c.).

Injections of Metarsenobillon were commenced on 25–9–29, and a further blood culture taken 27–9–29 was found to be sterile.

There was no subsequent rise of temperature, but the patient unfortunately developed acute melancholia and was transferred to Crumpsall Infirmary on 5–11–29.

Case No. 1210.

A multipara, aged 41, admitted 11–1–30 as a septic abortion, which occurred 24–12–29, when 3½ months pregnant.

A blood culture taken 13–1–30 showed the presence of hæmolytic streptococci to the extent of 55 per c.c.

A widely used mercury preparation, which is credited with good results in septicæmia, was injected intravenously, 12 c.c.'s being given.

A blood culture taken on 14–1–30 showed hæmolytic streptococci present in numbers exceeding 250 per c.c. on all three plates.

Metarsenobillon treatment was commenced on 16–1–30, and a blood culture on 18–1–30 yielded a growth of 200 hæmolytic streptococci per c.c.

A further blood culture was carried out on 22–1–30, two days after the last injection of Metarsenobillon, and after 72 hours' incubation at 37° C. the plates remained sterile.

This patient was extremely ill on admission, anæmic, exhausted, and unable to sleep. She had no pain, but complained of feeling light-headed.

Examination carried out during routine theatre treatment revealed a normal cervix, with no evidence of recent erosion or laceration.

Several pieces of "chorionic debris" were removed with glycerine-iodine intra-uterine injections. The temperature chart of this case (see page 144) shows the typical temperature and pulse-rate of a septicæmia.

On the evening of 15–1–30 the patient's condition became much worse. The heart sounds were softened, regular and rapid (128). On auscultation, abundant coarse râles, but no crepitations, were audible in both lungs. The abdomen was not distended, and there was no evidence of any peritonitis or parametritis. The patient was mildly delirious, with visual hallucinations, and very strange in manner and speech.

On the evening of the 16th the pulse-rate rose to 140.

The delirium persisted until 18–1–30.

During this time the prognosis was regarded as almost hopeless, and her relatives were informed accordingly.

A marked improvement became evident on 19–1–30, with the cessation of delirium, and a decrease in the pulse-rate, and on 20–1–30 the patient was quite rational and her general condition so much improved that hopes were entertained of her recovery.

The blood culture on 22–1–30, which proved sterile, and the daily improvement in the patient's condition prompted a favourable prognosis.

Some pyæmic abscesses which formed over the sacrum and over the third right metacarpal phalangeal joint were the only complications in an otherwise uneventful recovery, and the patient was discharged home on 17–4–30.

She visited the hospital two months afterwards and stated that she had been in excellent health.

Case No. 1268.

A primipara, aged, 32, who had a normal confinement on 13–4–30 and was admitted 21–4–30 from another hospital.

A blood culture carried out on 22–4–30 showed the presence of hæmolytic streptococci, 140 per c.c., and a further blood culture on 23–4–30 showed the presence of hæmolytic streptococci of over 250 per c.c. in each of the three plates, after 24 hours' growth.

Intramuscular injections of Metarsenobillon were commenced on 23–4–30, and on 24–4–30 a blood culture yielded only three hæmolytic streptococci per c.c. after 48 hours' growth, and blood taken on 26–4–30 remained sterile after 72 hours' incubation.

This patient was extremely ill on admission, with a fair degree of anæmia, and marked cervical lacerations and a small tear of the posterior vaginal wall with extensive sloughing.

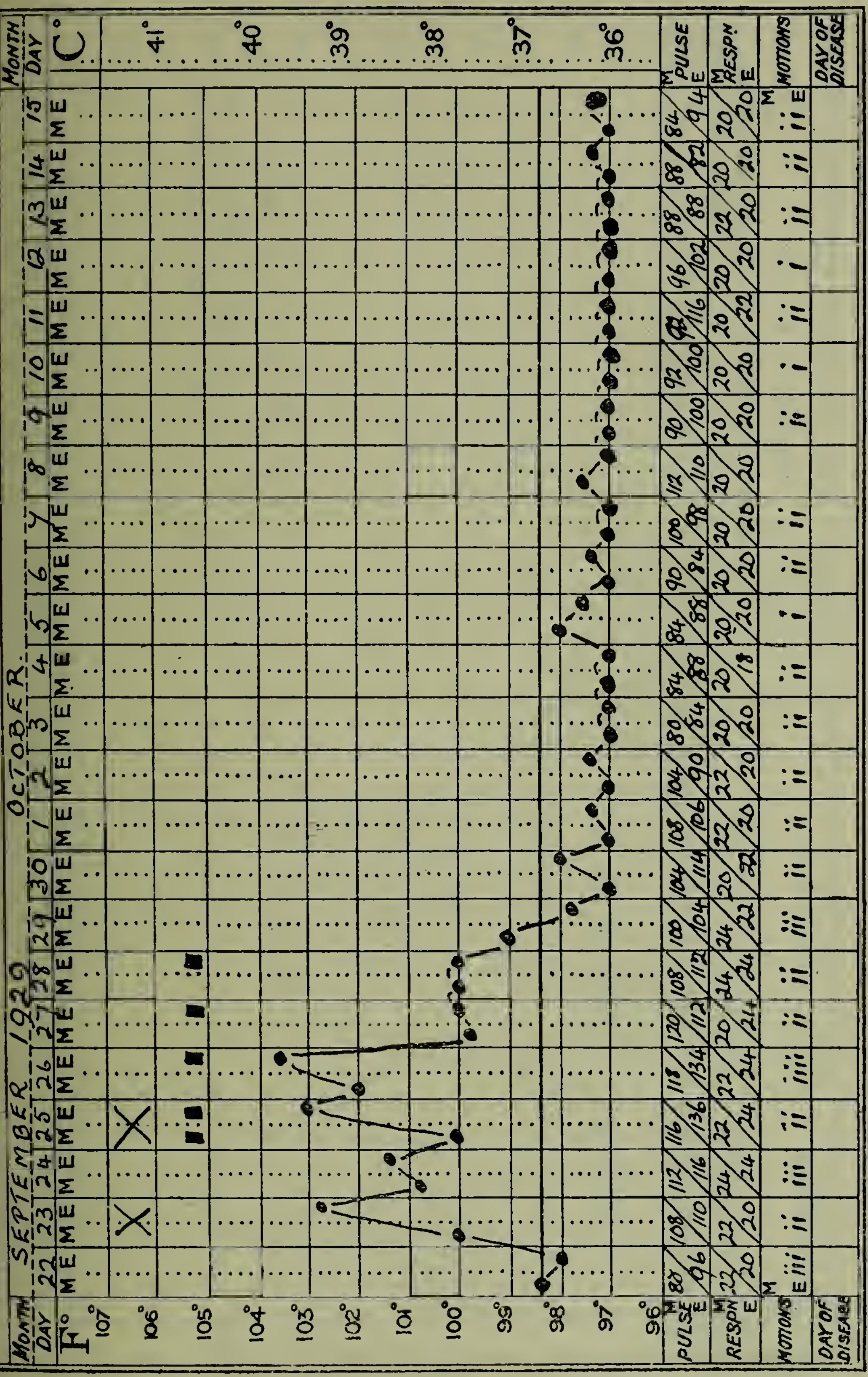
On 22–4–30 at 9-45 p.m. she became very delirious, with visual hallucinations and attempting to get out of bed. At this stage ptosis of the left eye was noticed, which gradually showed extensive conjunctivitis and proptosis on 23–4–30, and all the signs of retinal embolism were definitely established by 28–4–30, when the diagnosis was confirmed by a consultant eye surgeon. Her general condition was such that surgical interference was out of the question, and the patient died on 30–4–30.

A post-mortem examination revealed a left cavernous sinus thrombosis, and embolism of the retinal artery.

Cases 1210 and 1268, although belonging to the 1930 series, are referred to here on account of the profound degree of septicæmia exhibited in each case.

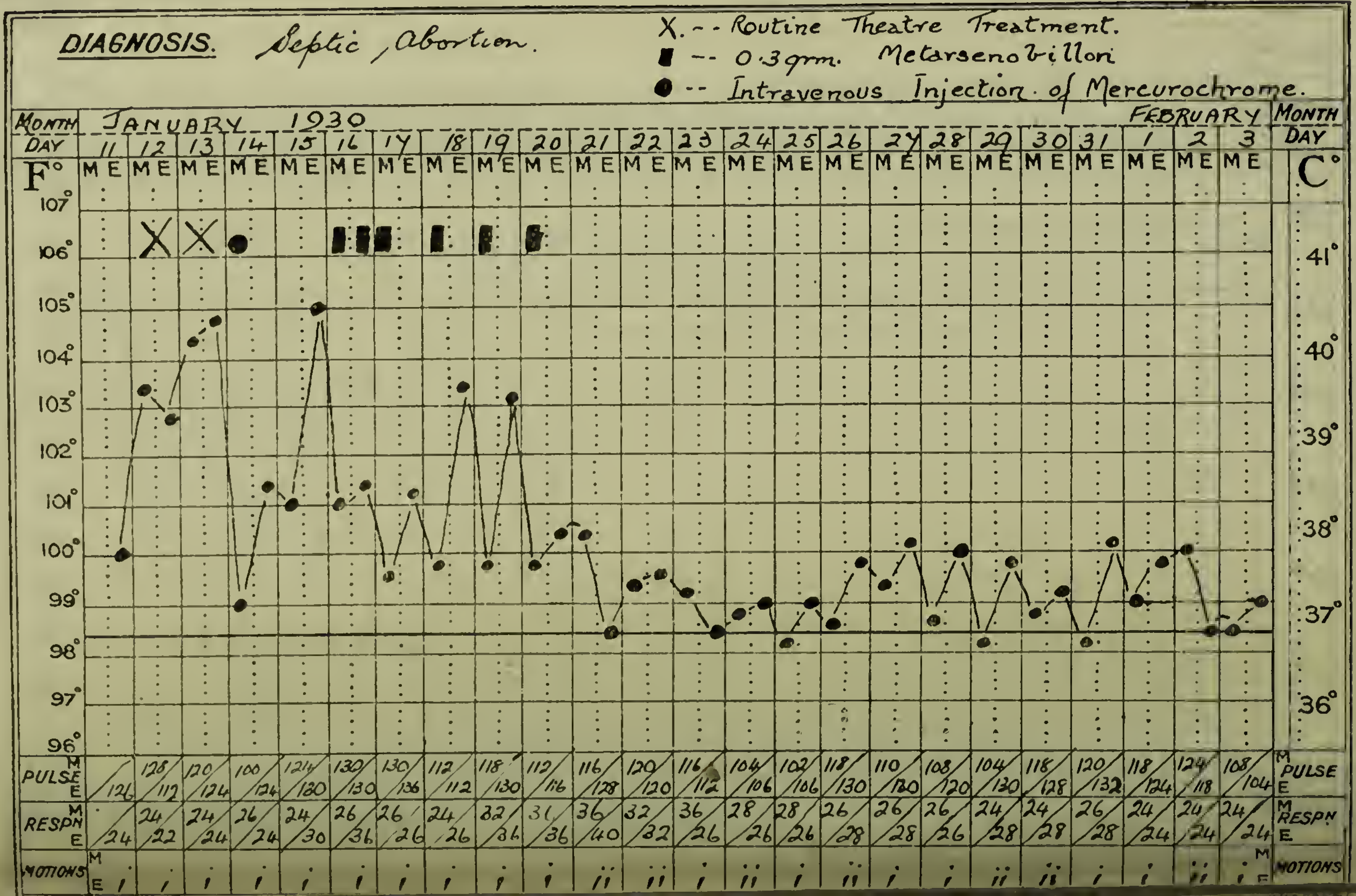
Diagnosis:

■ ... 0.3 gm. Metarsenobillon



CLINICAL CHART.

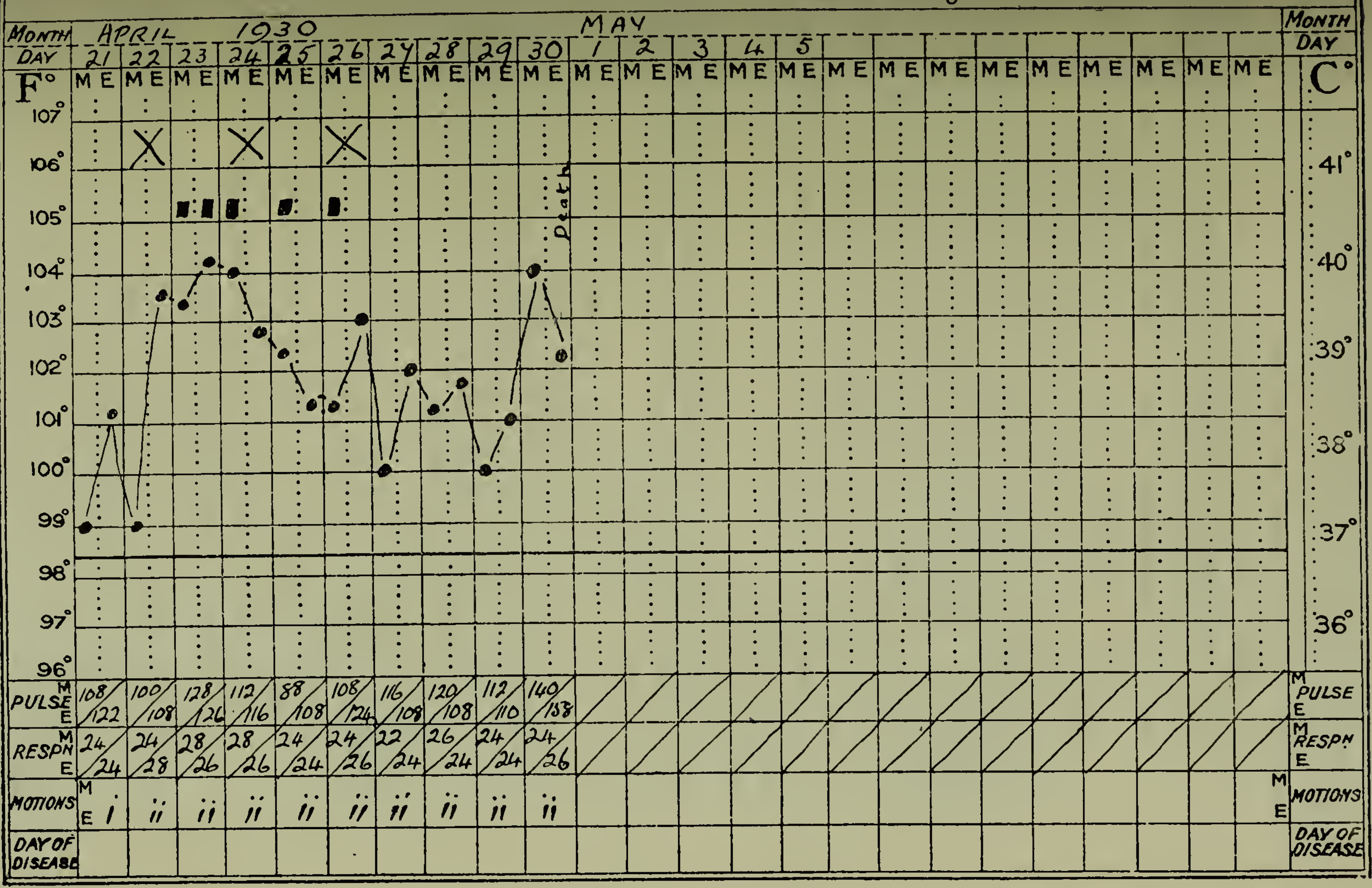
CASE NO. 1210—AGE 41 YEARS—MULTIPARA.



DIAGNOSIS. Puerperal Fever

X ...

■ ... 0.3 grm Metarsenobillon.



These cases are selected with a view to showing the results of treatment for puerperal septicæmia which is uncomplicated by a parametritis, peritonitis, or any condition not directly attributable to a blood infection, and from these cases at least two inferences can be drawn :- -

1. Provided the source of infection can be effectively treated so that repeated infections of the blood stream do not occur, intra-muscular injections of Metarsenobillon, given at definite intervals as shown below, can render the most heavily infected blood sterile in 2 to 4 days.
2. The intra-muscular injections of Metarsenobillon do not prevent the danger of the occurrence of emboli or pyæmic abscess.

The method of administration of Metarsenobillon is injection intra-muscularly into the buttock in doses of 0·3 grms., and it may be given with guaiacol glucose to prevent abscess formation. The solution in injected slowly at a depth of 3 cm., and the practice is adopted of injecting a small amount of air to clear the sinus made by the needle. The first dose is followed by a second dose 6 hours later, a third dose is given 15 hours later, and 2 further doses at 24 hours' interval. In severe infections 3 final doses at 24 hours' interval are sometimes given, as in case No. 1210. This constitutes a course of Metarsenobillon treatment, and if occasion arises it may be repeated in 10 days' time or later.

In over 40 cases so treated up to date, only 1 case of arsenical poisoning falls to be recorded, and this case made a good recovery without any treatment specially directed to this condition.

BACTERIOLOGICAL FINDINGS.

As stated earlier in this report, a blood culture is performed on every new patient admitted into the Puerperal Fever Ward (and repeated if necessary), and in addition, a swab is taken from the cervix and one from the vagina and cultured on blood agar plates.

The results are here tabulated :—

Blood Cultures (179)—

Sterile, 154.
Hæmolytic streptococci present in 17.
Hæmolytic and non-hæmolytic streptococci present in 4.
Non-hæmolytic streptococci present in 4.

Cervical Swabs (163)—

Hæmolytic streptococci present in 49.
Non-hæmolytic streptococci present in 53.
Sterile, 61.

Vaginal Swabs—

Hæmolytic streptococci present in 83.
Non-hæmolytic streptococci present in 145.

A variety of organisms was generally found in the vaginal cultures. Staphylococci were very numerous.

Occasionally non-hæmolytic staphylococci were present in cervical cultures, but were disregarded as having no pathogenic significance, as they were always associated with streptococci of the hæmolytic or non-hæmolytic type.

In every case of positive blood culture a corresponding organism was isolated from the cervix.

Special care is taken in swabbing, to prevent contamination. Sterile swabs are enclosed in a sterile glass tube which is inserted into the cervix before the actual swab is exposed. Withdrawal into the sterile glass tube is again necessary before removal from the vagina. The whole outfit is contained in a specially sealed sterile tube which is not uncovered until the actual time of swabbing. Swabs are again immediately resealed.

A fully equipped laboratory in proximity to the ward is essential to this work.

Blood cultures, cervical and vaginal swabs are incubated without delay, and since methods have been adopted to promote a rapid and efficient technique, the danger of contamination is reduced to a minimum.

It has been found that a patient may manifest no clinical signs of septicæmia and yet have an infection of the blood stream. Most of these cases have cleared without treatment, while others, on a subsequent blood culture, have shown a heavier infection. Many mild blood infections may be overcome by the natural defences of the tissues and the blood stream, provided the source of origin can be successfully treated. Blood cultures which give a growth of 12 or less hæmolytic streptococci per c.c. need not necessarily be regarded with apprehension. Such cases recover rapidly after one or two injections of Metarsenobillon in addition to the usual intra-uterine lymph drainage treatment.

POST-MORTEM EXAMINATIONS.

Every effort is made to obtain permission for a post-mortem examination on deaths occurring in the ward, and this year 10 autopsies were performed.

In each case the primary source of infection has been the placental site, or a lacerated cervix, from which infection has spread to the placental site. In such cases the uterus is always subinvoluted, with pale bloodless thickened walls, often showing septic thrombosis of the uterine vessels and an extreme degree of endometritis, which has rendered the internal surface of the uterus necrotic and shaggy in appearance, somewhat resembling matted fur, but much firmer to the touch.

In cases of peritonitis the spread of infection has been observed always to occur through the parametrium, most commonly the right side, and the ovaries may or may not be affected.

CONCLUSIONS.

Cases of puerperal fever admitted to hospital on the earliest sign of infection have a reasonable chance of recovery. This chance is solely dependent upon the extent to which the infection has spread from the primary source.

The day of disease on admission is shown to be on the average the seventh. It is probable that if cases were admitted on the third or fourth day the death rate from puerperal fever would be considerably reduced.

TABLE SHOWING THE ADMISSIONS OF PUERPERAL FEVER AND PUERPERAL PYREXIA CASES TO HOSPITAL, IN RELATION TO THE SEASON OF THE YEAR.

	1925	1926	1927	1928	1929	Average
January	6	1	9	8	12	7·2
February	9	10	4	14	12	9·8
March	13	8	11	14	12	11·6
April	16	18	8	21	16	15·8
May	13	20	11	20	18	16·4
June	14	10	11	16	12	12·6
July	22	10	15	16	12	15·0
August	13	10	16	17	14	14·0
September	6	15	12	5	10	9·6
October	16	15	8	11	19	13·8
November	18	16	8	11	17	14·0
December	14	11	9	13	14	12·2

BABIES ADMITTED WITH PUERPERAL FEVER CASES.

Patients admitted into the Puerperal Fever Ward after confinement are encouraged to bring the baby, if one exists, into hospital. The presence of the baby is considered a help in the recovery of the mother, and it has been found that a mother who has entered hospital without her baby will sooner or later desire to have her child and worry about its well-being.

In many cases the babies are poor in vitality and require special feeding and nursing. Unless the clinical condition contra-indicates, the mother is encouraged to feed her baby.

A special Babies' Ward is attached to the Puerperal Fever Ward, and a nurse is placed in charge, whose sole duty is the care of babies.

During the year 86 babies were discharged home.

There were 4 deaths, and the cause of death in each instance is here stated :—

(1) Pemphigus neonatorum.
(2) Septic abscess of neck.
(3) Defective vitality.
(4) Congenital heart disease.

INCIDENCE AND CONTROL OF INFECTIOUS DISEASES AMONGST THE NURSING AND DOMESTIC STAFF.

During the year 1929, 74 probationers and staff nurses joined the hospital staff. In accordance with the established routine, all were tested for susceptibility to diphtheria and scarlet fever. The results of these tests were as follows :—

Positive Schick reactors (indicating susceptibility to diphtheria)	34 = 45·9 per cent.
Positive Dick reactors (indicating susceptibility to scarlet fever)	17 = 22·9 per cent.
Negative Schick reactors (indicating immunity to diphtheria)	40 = 54·1 per cent.
Negative Dick reactors (indicating immunity to scarlet fever)	57 = 77·1 per cent.

Active Immunization against Diphtheria.

The usual course of 3 injections of 1 c.c. of toxoid antitoxin mixture, at weekly intervals, was given to all Schick positive reactors who remained on the hospital staff.

Number of Schick positives	34
Number immunized	32
Number rendered negative after 3 injections	27
Number who remained Schick positive 3 months after the 3rd immunizing dose, and who required a 4th c.c. to render them Schick negative	4

One case known to have been sensitized to serum was immunized by a graduated course of 5 injections.

The only severe reaction following the injection of toxoid antitoxin mixture occurred in the last mentioned case, where there was a moderately severe local and general reaction after the administration of ½ c.c. of T.A.M. In no other case was any reaction noted apart from some local redness and discomfort.

Active Immunization against Scarlet Fever.

Dick positive reactors received as a rule a course of 4 graduated doses of scarlet fever toxin.

1st	500	skin test doses.
2nd	2,500	,, ,, ,,
3rd	5,000	,, ,, ,,
4th	10,000	,, ,, ,,

These doses were given at 4 to 7 days interval and a re-test was then performed.

Of the 17 Dick positive reactors, 11 were rendered Dick negative by the above course. One case reacted severely to both 500 and 2,500 s.t.d.—on re-test she was then found to be negative and no further injections were given.

Of the 5 remaining Dick positive after the routine course, 3 required 5 injections; 1, 6 injections; and 1, 7 injections. The maximum dose employed was 40,000 s.t.d.

Reactions to scarlet fever prophylactic were more numerous than in the case of diphtheria prophylactic, no fewer than 6 reactions which necessitated the nurse being taken off duty being recorded.

Reactions appear to depend on individual idiosyncrasy rather than on the dose of toxin given, as they were noted after the injection of as small a dose as 500 s.t.d. and as large a dose as 40,000 s.t.d.

A local reaction is not very uncommon; other less common sequelæ are nausea, general malaise, and pyrexia; the most severe reaction appears to be the production of a scarlatiniform rash. Only 2 such rashes were observed, and it is noteworthy that the one followed the injection of 500 s.t.d. and the other 40,000 s.t.d.

It has been our experience that a general reaction is invariably followed by a change in the Dick state from positive to negative.

Incidence of Diphtheria.

Two cases of diphtheria fall to be recorded during 1929. Both cases occurred in nurses who had not been immunised.

Incidence of Scarlet Fever.

One case of scarlet fever occurred in a non-immunised nurse. No case of scarlet fever occurred in any nurse who had received a course of immunization against the disease.

Other Infectious Diseases.

The only other cases of infectious disease occurring among the nursing staff were :—

Measles, 1 case.

Mumps, 3 cases.

Rubella, 4 cases.

Prophylactic inoculation against typhoid and paratyphoid fever has been carried out as a routine procedure, and no case has occurred among the nursing staff.

Domestic Staff.

All the domestic staff were Dick and Schick tested during 1929. It was not practicable to immunise all those found to be susceptible.

The results of the tests carried out among the domestic staff are appended :—

Total tested 82	Schick +ve	28	= 34·1 per cent.
	Schick −ve	54	= 65·9 per cent.
	Dick +ve	10	= 12·2 per cent.
	Dick −ve	72	= 87·8 per cent.

Cases of infectious disease occurring among the domestic staff were :—

Scarlet fever, 1 case.

Rubella, 1 case.

PNEUMONIA.

(1) Primary Pneumonia.

Of the 2,850 known primary pneumonia cases 2,760 were fully investigated; 1,425 cases were classified as lobar pneumonia, 1,391 cases as lobular pneumonia, and 34 cases simply as pneumonia.

The case fatality among the investigated lobar pneumonia cases was 31·8 per cent., 53·2 per cent. among lobular pneumonia cases, and 59·3 per cent. among the unclassified cases.

The Health Visitors paid 9,998 visits in connection with cases suffering from all forms of pneumonia.

(2) Influenzal Pneumonia.

Of the 1,012 cases of influenzal pneumonia which came to our notice 988 cases were fully investigated, and of these 525 were males and 463 females.

The case fatality was 44·3 per cent.

Coinciding with the outbreak of influenza in the first quarter (mentioned below) there came to our notice 823 cases of influenzal pneumonia, of which 375 died—a case mortality rate of 45·5 per cent. These represent 81·4 per cent. of the cases, and 82·8 per cent. of the deaths for the whole year.

Secondary Pneumonia.

274 cases of secondary pneumonia were investigated during the year and were associated with the following diseases:—

Measles	97	cases.
Whooping Cough	173	,,
Other diseases	4	,,
Total	274	cases.

The case fatality was 35·8 per cent.

With 41 exceptions the cases occurred among children under five years of age.

Cases of secondary pneumonia are *not* notifiable under the Pneumonia, Malaria, and Dysentery Regulations of 1918.

INFLUENZA.

1,408 cases of influenza other than influenzal pneumonia came to the notice of this department through the official death returns, the activities of the Health Visitors, and a few by notification from medical practitioners. 1,393 cases were investigated, of which 1,299 occurred during the first quarter, when the disease was in epidemic form.

For the year the case fatality was 22·5 per cent.

The distribution according to sex of these investigated cases of influenzal pneumonia and of influenza is as follows :—

	Males.	*Females.*		*Totals.*
Cases	1,155	1,226	=	2,381
Deaths	351	402	=	753

The Health Visitors paid 3,103 visits in respect of influenza.

Epidemic Influenza.

An outbreak of the respiratory rather than of the general febrile type, involving 887 households, occurred during January, February, and March, when 1,299 cases, of which 585 were males and 714 females, came to the notice of the department. There were 278 deaths, 115 (41·4 per cent.) in males and 163 (58·6 per cent.) in females.

The disease was especially prevalent in children of from 1—10 years and in adults from 25—44 years, the total for these ages being 729, as is shown in the following table :—

Age Distribution.

	1—10 Years		25—44 Years	
	M.	F.	M.	F.
January	75	42	81	99
February	77	82	90	128
March	8	11	14	22
Total	295		434	
Percentage of total cases.. ..	22·7 %		33·4 %	

TABLE SHOWING THE NUMBER OF PRIMARY, INFLUENZAL, AND SECONDARY PNEUMONIA CASES WHICH HAVE COME TO THE KNOWLEDGE OF THIS SECTION OF THE PUBLIC HEALTH DEPARTMENT DURING 1929.

THE TABLE ALSO SHOWS THE NUMBER OF NOTIFIED CASES, THE NUMBER OF CASES FULLY INVESTIGATED, AND THE TOTAL NUMBER OF KNOWN CASES.

		Notified Cases	Cases fully investigated	Cases not fully investigated	Total known Cases of Primary, Influenzal, and Secondary Pneumonia occurring in 1929	
(a) *Primary Pneumonia*—						
1. Number of primary pneumonia cases notified and fully investigated	2,227	2,265	2,227 2,760		2,850 (Primary)	4,136
2. Number of primary pneumonia cases notified and not fully investigated	38			38 90		
3. Number of primary pneumonia deaths not previously notified but fully investigated ..	533		533			
4. Number of primary pneumonia deaths not previously notified and not fully investigated	52			52		
(b) *Influenzal Pneumonia*—						
1. Number of influenzal pneumonia cases notified and fully investigated	856	875	856 988		1012 (Influenzal)	
2. Number of influenzal pneumonia cases notified and not fully investigated	19			19 24		
3. Number of influenzal pneumonia deaths not previously notified but fully investigated ..	132		132			
4. Number of influenzal pneumonia deaths not previously notified and not fully investigated	5			5		
(c) *Secondary Pneumonia*—						
1. Number of secondary pneumonia cases notified and fully investigated	264	265	264 273		274 (Secondary)	
2. Number of secondary pneumonia cases notified and not fully investigated	1			1 1		
3. Number of secondary pneumonia deaths not previously notified but fully investigated ..	9		9			
4. Number of secondary pneumonia deaths not previously notified and not fully investigated	0			0		
TOTALS	4,136	[illegible]	[illegible]	[illegible]	[illegible]	

STATEMENT OF WORK DONE BY THE HEALTH VISITORS.

The staff at the end of the year 1929 consisted of a Superintendent, an Assistant Superintendent, 57 Health Visitors, a Cleansing Nurse, and 8 Female Clerks.

Two additional appointments were made in March in order that a health visiting service might be commenced in the districts of Crumpsall and Cheetham and on the new estates on the south side of the City. Hitherto these areas had only been visited for special cases and cases of notifiable illness. They are, unfortunately, very wide in extent, and further help is needed if regularity in visiting is to be maintained.

The Health Visitors have continued to carry out their usual work, which includes the visitation of infants in their homes from the time the attendance of the doctor or midwife ceases until the completion of the child's fifth year; the investigation of still-births, other than those occurring in the practice of midwives (these last being undertaken by the Inspectors of Midwives); revisits with regard to the ante-natal care of mothers, where neo-natal deaths have occurred; the investigation of cases of measles, whooping cough, pneumonia, and influenza; the investigation and following up of cases of scabies and vermin; and the attendance at the Infant Welfare Centres in their respective districts during certain sessions each week.

Table 1 shows the work done throughout the year in each district worked by the Health Visitors.

Table 2 compares the work of 1929 with that of the four preceding years.

Notification of Births Act.

For the first time since 1920 there has been an increase in the number of births registered during the year over those registered in the previous year.

13,032 births were registered in 1929 as compared with 12,909 in 1928.

The total number of notifications received in 1929 under the Notification of Births Act was 14,096, of which 4,899 were from doctors, 9,029 from midwives, and 168 from parents. Out of the total of 14,096, those occurring in the districts covered by the Health Visitors numbered 12,472. The registered births within the City numbered 13,032, and of these 11,346 were referred to the Health Visitors.

In addition to the above, in 1929 the Health Visitors "found" on their respective districts 210 children who were born during the current year, 228 who were born during 1928, 199 born during 1927, 105 born during 1926, and 53 born during 1925, thus adding a total of 795 new cases to be visited to those already distributed to them through the Notification of Births Act.

These cases were chiefly removals into Manchester from other towns, but a few were removals from areas of the City which were unvisited at the date of birth.

Deaths.

1,195 deaths of infants under one year of age occurred in the districts covered by the Health Visitors during 1929. Of these, 148 lived less than a day, 146 died over a day old and within a week, 162 died over a week old and within a month, 178 died over a month and under three months old, 226 over three months and under six months old, 172 over six months and under nine months old, and the remaining 163 between the ages of nine months and one year.

In 324 cases death was due to bronchitis and pneumonia, in 256 cases to prematurity, in 158 cases to enteritis, in 28 cases to debility and marasmus, in 38 cases to convulsions, in 10 cases to accidental deaths, including those due to want of attention at birth ; 13 cases died from tuberculosis, 7 from syphilis, 11 from influenza, 72 from whooping cough, 17 from measles, and the remaining 261 deaths were due to various other causes.

Table 3 shows the distribution of deaths, according to districts, of children under one year of age.

There were 386 deaths of children of one to two years of age during 19-9 in the "visited" areas of the City.

In 192 cases death was due to bronchitis and pneumonia, 17 children died from enteritis, 1 from debility and marasmus, 3 from convulsions, 8 from accidental causes, 14 from tuberculosis, 4 from influenza, 27 from measles, 74 from whooping cough, and 46 from various other causes.

Table 4 shows the distribution of deaths, according to districts, of children aged one to two years.

There were also 285 deaths of children of two to five years of age during 1929 in the "visited" areas of the City. Of these, 127 occurred in the third year, 90 in the fourth year, and 68 in the fifth year.

In 86 cases death was due to bronchitis and pneumonia, 3 children died from enteritis, 1 from convulsions, 16 from accidental causes, 20 from tuberculosis, 15 from influenza, 13 from measles, 58 from whooping cough, and 73 from various other causes.

Table 4A shows the distribution of deaths, according to districts, of children aged two to five years.

Summer Diarrhœa.

From July 15th to September 30th, 1929, 183 cases of summer diarrhœa were visited. Of these, 48 occurred during the last two weeks in July, 61 during the month of August and 74 during the month of September. These figures resemble closely those for the preceding year, when 196 cases were visited.

Of the total cases 102 were children under twelve months, and of these 17 were having breast feeding, 14 mixed feeding, and 71 entirely artificial feeding at the onset of the illness.

32 cases died, though not all of the deaths were ascribed to diarrhœa ; 25 of the total deaths were those of children under one year of age, and of these 12 had not yet attained their fourth month.

35 cases were admitted to hospital.

The distribution of these cases is shown in Table 5.

Child Welfare Centres.

The work of the Health Visitors and that of the Infant Welfare Centres is becoming more and more closely co-ordinated, and with satisfactory results. The presence of the Health Visitors at the Centres is undoubtedly of assistance in procuring the first attendances of the mothers, and on the other hand there are many advantages accruing to the Health Visitors from the broadened outlook on their work.

Unfortunately the old truth of no gain without loss is manifested by the unavoidable decrease in the number of visits paid by the Health Visitors throughout the year ; it is hoped, however, by a careful readjustment of the visiting, to devote the necessary time to those cases which from inability, indifference, or a misplaced idea of social status do not yet frequent the Centres.

The Manchester Babies' Hospital.

The 20 beds for children under one year, and the 10 beds reserved for cases of rickets, have been continuously occupied throughout the year and, there has always been a waiting list.

During 1929, 111 applications were received for admission to the beds for children under 1 year in the hospital. Of these, 16 were cancelled for the following various reasons : 7 were admitted into private beds ; 3 were admitted to other hospitals ; 3 died before beds were available ; 1 so much improved whilst on the waiting list that hospital treatment was no longer necessary ; and in 2 instances the parents at the last minute were unwilling to allow their children to go into hospital. 95 cases were admitted to hospital.

These came from the following Child Welfare Centres:—

72, Rosamond Street West, Chorlton-upon-Medlock	20
230, Hyde Road, Gorton	6
45, Higher Ardwick	14
93, Hamilton Street, Collyhurst	8
135, Pollard Street, Ancoats	6
1, Manipur Street, Openshaw	5
153, Cheetham Hill Road, Cheetham	7
686, Oldham Road, Newton	2
42, Lower Moss Lane, Hulme	13
Clayton	1
Conran Street, Harpurhey	2
Rusholme	2
Elm Street, Miles Platting	2
Public Health Office	7
Total	95

The various conditions from which the children were notified to be suffering were:—

Malnutrition	7	Pneumonia	4
Atrophy	18	Marasmus	11
Dyspepsia	33	Gastritis	1
Rickets	5	Anæmia	1
Gastro Enteritis	5	Prematurity	4
Cleft Palate	1	Debility	5
		Total	95

The ages of the infants on admission were:—

Under 1 month	3	Aged 7 months	4
Aged 1 ,,	5	,, 8 ,,	5
,, 2 months	21	,, 9 ,,	2
,, 3 ,,	11	,, 10	2
,, 4	15	,, 11	1
,, 5	7	Over 11	11
,, 6	8		
		Total	95

The length of stay in hospital varied from one week to 33 weeks. The average was about 8 weeks.

Eight of the cases died in hospital and 5 have died since discharge. Three of these deaths were due to epidemic diseases and the fourth was the result of an accident. About 84 per cent. of the mothers attended the Infant Welfare Centres regularly after receiving their infants home again from hospital. This is an improvement on last year. The Health Visitors visit the children promptly as soon as the notification of discharge is received, and reports on the condition of discharged cases are sent to the hospital in May and in November each year. Attendance at a centre is always strongly urged. From the latest reports on these children, 18 may now be said to be in a healthy condition, 3 still require supervision, and 55 are improving satisfactorily; 3 cases were still in hospital at the time of writing this report.

Sixty-eight applications were received for admission to the "Rickets" beds during the year and 53 children were admitted.

For the following reasons the other 15 applications were cancelled :—5 cases were admitted to other hospitals, 5 cases were not admitted because of improved condition, and in 2 cases the parents eventually refused to allow them to go into hospital, 3 cases were admitted to private beds as urgency cases.

The 53 cases admitted were from the following Child Welfare Centres :—

Clayton	1
Abbey Hey	1
Harpurhey	1
72, Rosamond Street, Chorlton-upon-Medlock	4
1, Manipur Street, Openshaw	2
230, Hyde Road	1
93, Hamilton Street, Collyhurst	11
45, Higher Ardwick	10
135, Pollard Street, Ancoats	6
Rusholme	3
Cheetham Hill Road	5
686, Oldham Road, Newton	1
Elm Street	2
42, Lower Moss Lane, Hulme	2
Public Health Office	3
Total	53

The length of stay in hospital varied from 3 days to 26 weeks.

The ages of the children on admission were :—

Aged 1 year	2	Aged 1 year 8 months ..	4
,, 1 ,, 1 month ..	3	,, 1 ,, 9 ,, ..	5
,, 1 ,, 2 months ..	3	,, 1 ,, 10 ,, ..	2
,, 1 ,, 3 ,, ..	7	,, 1 ,, 11 ,, ..	3
,, 1 ,, 4 ,, ..	2	,, 2 years	5
,, 1 ,, 5 ,, ..	1	,, 2 ,, 2 months ..	2
,, 1 ,, 6 ,, ..	8	,, 3 ,, ...	1
,, 1 ,, 7 ,, ..	4	,, 3 ,, 1 month ..	1
		Total	53

Of the 53 cases admitted, the latest reports with regard to those which were discharged state that 10 are now in a satisfactory condition, 24 are improving, 10 are not yet very satisfactory, 6 cases have removed from Manchester, 1 case has died since discharge, and 2 cases are still in hospital. 60 per cent. of the cases have attended the centre since discharge from hospital.

Creche Ward, Monsall.

This ward, which consists of 8 beds, is kept for the reception of children between the ages of 1 and 3 years suffering from rickets and malnutrition.

During 1929, 17 applications for admission to the Creche Ward were received and 15 children were admitted. 2 cases were not admitted because one child had so much improved while on the waiting list hospital treatment was no longer necessary, and the other child died before a vacancy occurred.

The 17 cases admitted were from the following Child Welfare Centres :—

42, Lower Moss Lane, Hulme	3
Elm Street, Miles Platting	2
1, Manipur Street, Openshaw	1
135, Pollard Street, Ancoats	1
72, Rosamond Street West, Chorlton-upon-Medlock	4
230, Hyde Road, West Gorton	1
45, Higher Ardwick	2
686, Oldham Road, Newton Heath	1
Total	15

Fourteen children were admitted suffering from rickets and one from cervical adenitis.

The length of stay in hospital varied from 3 weeks to 6 months.

The ages of the children on admission were :—

Aged 1 year 4 months	1	Aged 2 years	1
„ 1 „ 6 „	2	„ 2 „ 2 months	1
„ 1 „ 8 „	1	„ 2 „ 4 „	1
„ 1 „ 9 „	1	„ 2 „ 6 „	1
„ 1 „ 10 „	2	„ 3 „	1
„ 1 „ 11 „	2	„ 3 „ 7 months	1
		Total	15

Nine cases were discharged ; 5 can be reported as quite satisfactory ; 4 cases continue to improve ; 1 case died in hospital ; and 5 are still in.

Only 4 of these children attended the Infant Welfare Centre after their discharge.

Commencing in September, 1928, and continuing throughout the year, the Health Visitors in the Wards of New Cross, St. Clement's, Miles Platting, Beswick, St. Michael's, and Collyhurst, for the " Inner Ring " ; and in the Levenshulme, Burnage, Withington, Chorlton-cum-Hardy, and parts of Longsight and Rusholme Wards, for the " Outer Ring," have been responsible each week for the attendance at the Manchester Babies' Hospital of fifteen to twenty children, between the ages of eight months and two years, for a special X-Ray examination in connection with an extensive investigation into the incidence of Rickets.

These visits have afforded many of the mothers a unique opportunity of seeing the work which the Manchester Babies' Hospital is doing, and Dr. Chisholm and the hospital staff have spared no effort in making the short time available of great educational value to the mothers.

MEASLES, GERMAN MEASLES, WHOOPING COUGH, PNEUMONIA, AND INFLUENZA.

Measles.

Cases notified by doctors	7,263
Cases found by Health Visitors or notified by others than doctors	2,249
Total number of known cases	9,512
Total number of cases investigated	9,512

An analysis of the 9,512 investigated cases is given below :—

	Nursed at Home 9,162		Removed to Hospitals 312		* Developed Measles whilst in Hospitals 38		Tot Cas Inv tiga
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
Number of cases ..	8,964	198	209	103	28	10	9,51
Recovered ..	8,961	160	200	75	26	4	9,42
Died	3	38	9	28	2	6	8
Case fatality .	·03%	19·19%	4·30%	27·18%	7·14%	60%	·90

* Patients in hospitals for other conditions developing measles.

In addition to the above, 78 cases of measles, classified as "late" cases, were found after complete recovery had been made.

The Health Visitors paid 22,135 visits in connection with the above measles cases during 1929.

German Measles.

Total number of German measles cases notified..	499
" " " " visited	499
" " " " recovered	498
" " " " died	1
The number of visits paid by the Health Visitors in respect of German measles was	1,169

Whooping Cough.

Whooping cough, a disease which is not compulsorily notifiable by the medical profession, has since 1911 been included in a local act as one of three infectious diseases in which parents and guardians of school children must notify the head teacher of any child known or suspected to be suffering from this disease.

The information is passed on to the Medical Officer of Health by the Education Department.

Total number of cases notified	.. ..	4,037
Total number of cases visited ..	.. ..	4,037

An analysis of the 4,037 investigated cases is shown below :—

	Nursed at Home 3,774		Removed to Hospitals 253		* Developed Whooping Cough whilst in Hospitals 10		Total Cases Investigated
	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	No Pneumonia Complications	Complicated by Pneumonia	
ber of es ..	3,507	267	100	153	4	6	4,037
ered ..	3,459	155	69	77	1	4	3,765
.. ..	48	112	31	76	3	2	272
fatality .	1·36%	41·94%	31%	49·67%	75%	33·3%	6·73%

* Patients in hospital for other conditions developing whooping cough.

As in the case of measles, in addition to the above, 631 cases of whooping cough were found after complete recovery had been made and have been classified as "late" cases.

The Health Visitors paid 12 418 visits in connection with the above whooping cough cases during 1929.

The distribution of measles, German measles, and whooping cough throughout the City during 1929, and the mortality therefrom, together with a report showing how the various age groups have been affected by measles, are to be found elsewhere. (See pages 45 to 49.)

Pneumonia.

A full report of the work done during 1929 with regard to pneumonia appears elsewhere. (See pages 152 to 154.)

In 1929, 3,405 notifications of pneumonia were received; 2,265 referred to cases of primary pneumonia; 875 to cases of influenzal pneumonia; and 265 to cases of secondary pneumonia. Secondary pneumonia does not come under the Pneumonia, Malaria, and Dysentery Regulations of 1918, but, being notified, a record was kept of the cases and they were investigated.

In addition to the notified cases, 731 deaths from pneumonia, not previously notified, were brought to our notice from the death returns.

On the 4,136 total known cases of pneumonia, 4,021 were fully investigated, and the Health Visitors paid 9,998 visits in connection with these investigations.

Influenza.

During 1929, 1,408 cases of influenza, other than influenzal pneumonia, were brought to the notice of the Department, and 1,393 cases were fully investigated by the Health Visitors, who paid 3,103 visits in connection with these cases.

Relief.

The grant (originally made in 1917) to supply milk to young children suffering from measles, whooping cough, pneumonia, etc., in families where the actual income was below the standard scale, was continued during the year.

Throughout the year 526 applications for milk were granted and 8,509 pints of milk were given.

As in preceding years, we have endeavoured to use these grants of milk as a means towards the better nursing of young patients at home.

Verminous Work.

During 1929 the number of notifications in respect of verminous cases received from the Education Department was 556. This number shows an increase as compared with 1928, when 434 notifications were received.

Of scabies cases, 449 notifications of families thus affected were received from the Education Department, as compared with 487 in 1928.

The Cleansing Station was in use on 15 half days for the compulsory cleansing of school children throughout the year, and 39 children were cleansed. Of these, 1 had body vermin only, 10 had head vermin only, and 28 had body and head vermin. There were 5 voluntary cleansings carried out at the Cleansing Station this year.

In addition to her work at the Cleansing Station and the clerical duties appertaining to this appointment, the Cleansing Nurse paid 694 visits to verminous cases, and carried out cleansings of 68 children in their homes at the request of the parents during the year. Where necessary the clothing and bedding have been stoved. She also carried out at the Cleansing Station on the instructions of the Medical Officer of Health 46 treatments of scabies cases.

Although these "home cleansings and scabies treatments" take much time, the results are very satisfactory, and fully justify their continuance.

The Cleansing Nurse was required as a witness in ten cases of prosecution for verminous conditions.

Fourteen cases of neglect were referred to the National Society for the Prevention of Cruelty to Children during the year, and visits from the Society's Officers have been most helpful even without resorting to prosecution.

A summary of the work done by the Health Visitor appointed by the "Ladies' Society for Visiting the Jewish Poor," and whose work is subjected to the supervision of the Medical Officer of Health, is given in the following tables:—

Work of the Jewish Health Visitor during the Year 1929.

DISTRICT	HOUSE-TO-HOUSE INSPECTIONS		RE-INSPECTIONS			Primary Infants	Subsequent	Children from 1 to 5 years	Total Number of Visits	LIMEWASHING (Yards, Sculleries, etc.)
	Number of Visits	No. of defects referred to Sanitary Dept.	Number of Visits	Defects Remedied	New Complaints Referred					
Red Bank and Strangeways	611	128	78	126	106	217	2114	2383	5325	..

TABLE 2.

SHOWING THE WORK DONE BY THE HEALTH VISITORS DURING THE YEAR 1929 AND COMPARING IT WITH THE WORK DONE DURING THE FOUR PRECEDING YEARS

Classification of Visits	1925	1926	1927	1928	192
Primary visits to Infants	13,260	13,159	12,067	11,879	12,1
Subsequent visits to Infants	53,226	56,606	64,239	60,011	59,
Subsequent visits to Children over 1 year of age and under 5 years	140,850	144,597	162,357	148,993	137,9
Other visits *re* Infants and Young Children, etc.	317	308	334	300	4.
Special visits *re* Sanitary Defects ..	1,147	715	870	694	4
Special Investigations	....	....	....	757	.
Visits *re* Limewashing	1,732	732	....	....	...
Primary visits to Verminous Cases (including Scabies)	652	739	612	600	5
Subsequent visits to Verminous Cases	1,652	1,760	1,976	2,031	1,4
Measles Investigations	7,306	10,733	12,951	6,975	9,0
Subsequent visits	8,849	17,835	16,456	16,324	13,1
German Measles Investigations ..	1,820	895	378	1,341	4
Subsequent visits	2,288	1,136	559	1,859	6
Whooping Cough Investigations ..	3,196	2,129	2,204	3,134	3,9
Subsequent visits	5,679	3,670	4,579	5,767	8,4
Visits *re* Relief	153	137	101	76	
Visits *re* Influenza	932	502	2,196	534	3,1
Visits *re* Pneumonia	7,246	6,695	8,814	7,930	9,9
Unsuccessful visits	2,138	2,163	1,907	2,339	1,74
Still-Birth Investigations	....	....	68	554	6
Other Ante-Natal visits	....	....	....	142	2,3
Total visits	252 443	264,511	292,668	272,240	266,4
Number of Health Visitors	53	55	55	55	5
Number of Health Visitors dealing only with Measles, Whooping Cough, and Pneumonia Cases	4	4	4	4	
Number of Districts worked	49 (4 temporary Measles Visitors also worked for four months)	51 (2 temporary Measles Visitors worked for seven months and 1 for three months	51 (1 temporary Measles Visitor also worked for one month)	51	5
Attendances at Child Welfare Centres	....	....	....	1,969	2,067

Table I.—HEALTH VISITORS' YEARLY SUMMARY—TOTALS FOR THE TWELVE MONTHS ENDING DECEMBER, 1929.

DISTRICTS	No. of Births	INFANT WORK							ANTI-NATAL CARE				OVERCROWDING AND SANITARY DEFECTS					SCABIES		VERMINOUS WORK		MEASLES WORK				WHOOPING COUGH		PNEUMONIA		INFLUENZA		MISCELLANEOUS VISITS								TOTAL VISITS	REMARKS
									Still Births		Expectant Mothers											Measles		German Measles											Wrong Addresses						
		Primary Visits	Subsequent Visits	Children 1 to 2 years	Children 2 to 3 years	Children 3 to 4 years	Children 4 to 5 years	Investigations re Deaths of Children under 5 years from Diarrhœa	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Overcrowdings	Overcrowdings Abated	Defects Found	Defects Remedied	Special Visits to either	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Primary Visits	Subsequent Visits	Visits re Infantile Diarrhœa	Visits re Relief	Visits "Out"	Infants	Infectious Diseases	Neo-Natal Visits	Special Visits	Sessions at Centres		
All Saints—North	169	202	1,268	743	649	713	704	2	4	..	43	13	..	..	(56)	(35)	69	8	12	9	142	106	341	..	24	56	229	57	78	31	31	(1)	..	..	10	1	7	1	(53)	5,553	
,, —South	297	314	1,555	822	718	584	406	9	8	4	44	19	..	..	(27)	(16)	16	15	12	6	7	107	173	5	3	56	112	55	61	39	31	(4)	8	..	21	..	..	..	(56)	5,210	
Ardwick—North	244	247	1,266	720	739	572	529	3	6	3	26	2	(1)	..	(6)	(1)	..	6	6	3	6	162	320	7	11	93	152	61	90	48	42	(1)	..	..	1	..	4	..	(49)	5,125	
,, —South	173	188	1,172	531	546	457	603	4	6	5	44	13	..	..	(18)	(2)	..	1	2	3	2	137	227	6	6	44	98	40	55	28	19	..	..	..	..	..	7	..	(51)	4,244	
,, —East	183	206	1,220	670	634	584	587	1	5	10	48	46	(4)	(2)	(51)	(81)	1	11	18	2	15	75	178	9	14	61	182	47	104	47	39	(11)	..	..	8	..	3	..	(50)	4,825	
Blackley	244	343	1,165	603	457	351	524	1	11	4	32	11	(1)	..	(4)	(1)	..	..	1	1	2	166	280	7	9	122	232	42	65	57	20	(5)	..	2	4	..	10	..	(45)	4,522	
Bradford—East	151	164	904	598	555	484	467	4	5	6	51	7	..	..	(44)	(20)	2	5	12	5	6	157	311	4	6	34	117	39	77	14	18	(2)	1	1	2	1	2	..	(50)	4,059	
,, —West	204	214	1,101	651	575	455	453	1	5	7	52	14	(1)	..	(38)	(51)	27	6	8	10	41	123	262	3	14	43	110	53	74	23	23	(2)	3	..	3	..	2	..	(51)	4,356	
Beswick—North	187	219	1,097	829	687	628	601	7	4	5	30	..	..	..	(39)	(30)	19	2	9	22	48	187	389	3	2	52	76	57	129	47	35	(2)	..	..	..	..	3	..	(48)	5,187	
,, —South	171	160	1,035	563	642	555	557	3	4	..	34	5	..	..	(42)	(23)	56	2	13	18	27	150	253	1	2	43	108	47	80	16	..	..	6	..	..	..	..	..	(52)	4,380	
Collyhurst—East	174	180	951	719	724	616	435	2	6	3	16	..	..	..	(23)	(9)	1	3	5	2	2	85	134	3	4	42	73	23	64	7	3	..	..	..	..	..	8	..	(39)	4,111	
,, —West	202	199	1,027	654	550	572	610	1	3	3	63	15	..	(1)	(87)	(4)	..	1	4	11	19	103	224	3	4	54	144	64	122	33	24	(3)	..	..	3	..	4	..	(54)	4,514	
,, —Central	157	185	863	583	665	633	672	7	5	4	18	4	(1)	..	(7)	(1)	..	1	10	8	29	97	197	3	8	48	151	49	89	6	4	(1)	5	..	..	..	..	..	(45)	4,344	
Gorton—N. E.	133	137	625	782	737	592	461	..	..	..	5	..	..	..	(18)	(26)	19	1	1	..	3	19	54	2	5	7	22	6	6	1	..	(1)	..	..	..	..	..	..	(42)	3,485	
,, —N. W.	206	213	929	579	561	473	458	2	5	9	36	4	..	..	(4)	(6)	7	6	8	2	10	102	140	..	2	17	58	28	49	10	9	..	8	..	2	2	12	..	(49)	3,741	
,, —S. E.	225	227	826	577	552	449	526	2	6	4	3	1	..	..	(46)	(12)	46	7	13	4	23	98	177	4	6	33	102	30	79	28	42	..	..	..	..	..	1	..	(50)	3,866	
,, —S. W.	263	276	1,006	1,198	946	747	230	1	12	..	30	..	..	..	(3)	(1)	..	3	8	9	8	92	105	1	2	63	133	37	43	70	40	(1)	..	..	..	..	42	..	(47)	5,102	
Harpurhey—North	181	188	1,215	738	635	670	666	1	6	4	7	..	..	..	(21)	(5)	..	3	9	13	26	130	207	4	15	43	93	39	119	32	29	(13)	..	..	..	..	6	..	(50)	4,898	
,, —South	176	199	1,254	804	728	653	624	2	3	3	40	15	..	..	(14)	(12)	1	7	5	3	8	87	142	4	28	67	145	24	47	21	15	..	..	..	3	..	..	..	(51)	4,932	
Levenshulme	242	270	1,230	393	339	400	230	..	7	7	..	1	..	..	(16)	(5)	1	..	..	..	..	49	45	8	9	72	188	27	58	24	18	(8)	..	..	1	..	2	..	(47)	3,379	
Longsight	290	287	985	671	622	519	617	3	7	1	3	..	..	..	..	..	..	..	..	..	..	166	168	11	14	105	255	46	93	10	17	..	..	..	..	..	7	..	(47)	4,607	
Medlock Street—East	192	178	1,316	856	958	868	800	4	5	4	36	5	..	..	(45)	(44)	34	3	4	5	30	144	314	3	1	37	126	42	145	11	20	..	..	..	..	..	7	..	(54)	5,956	
,, ,, —South	232	276	897	622	581	482	527	2	10	3	42	..	..	..	(11)	(11)	8	5	6	4	1	67	150	1	1	39	140	30	55	6	22	..	1	..	..	..	..	..	(38)	3,978	
,, ,, —S. E.	211	219	1,039	771	696	649	757	2	10	13	33	6	..	..	(57)	(37)	37	12	32	6	47	137	399	3	13	42	183	59	122	38	62	..	5	..	..	..	12	..	(49)	5,404	
Miles Platting—North	156	166	1,225	783	709	527	506	2	2	1	59	3	..	..	(18)	..	..	1	2	3	54	125	241	3	2	61	185	37	94	26	41	(18)	..	..	..	1	..	..	(49)	4,859	
,, —East	159	144	1,092	728	579	510	565	1	3	..	21	..	..	..	(7)	(6)	..	7	4	12	28	99	165	16	15	58	75	44	69	9	7	(1)	3	..	..	..	4	..	(45)	4,258	
,, —West	208	216	1,258	950	810	797	880	2	1	3	35	4	..	..	(15)	(11)	12	2	1	4	32	92	169	4	5	59	150	45	180	4	12	(4)	2	..	3	2	2	..	(52)	5,736	
Moss Side—East	283	303	1,456	607	445	390	369	1	4	6	25	9	..	..	(6)	(3)	..	2	2	2	7	78	126	4	4	37	58	40	46	56	29	..	..	..	6	..	7	..	(55)	4,119	
,, —West	281	309	986	575	489	459	637	2	9	8	6	5	..	..	..	..	1	2	5	..	2	71	124	7	6	57	151	61	85	99	61	(3)	..	..	..	..	8	..	(46)	4,225	
Moston	351	291	879	682	630	568	699	4	11	7	50	3	(3)	..	(12)	(17)	..	4	9	..	..	90	258	24	77	71	123	41	66	34	40	(1)	2	..	1	..	11	..	(45)	4,675	
New Cross—Central	188	190	1,505	943	781	607	512	8	4	1	63	26	(1)	..	(7)	(5)	6	11	12	12	56	105	211	12	22	61	135	70	159	30	31	(3)	1	..	1	1	9	1	(49)	5,586	
,, —South	204	208	1,095	890	774	655	679	5	6	3	69	10	..	..	..	..	..	8	13	22	54	105	187	5	3	71	159	108	187	34	48	..	3	..	1	..	8	..	(51)	5,410	
,, —West	280	283	1,452	1,258	1,138	973	876	8	5	12	69	55	(8)	..	(22)	(2)	3	8	42	9	25	121	282	12	11	22	166	111	271	1	8	(4)	1	..	..	10	2	..	(51)	7,234	
Newton—North	181	202	1,107	553	470	449	492	4	5	2	17	10	..	..	(3)	(1)	5	1	3	4	8	43	85	5	9	59	202	62	185	12	14	(1)	2	..	3	..	..	..	(55)	4,013	
,, —South	128	136	663	465	491	474	727	1	9	3	47	27	(4)	..	(19)	(13)	3	..	..	7	16	10	31	3	7	18	72	25	73	18	36	..	..	..	53	..	8	..	(51)	3,423	
Openshaw	278	270	1,129	669	535	509	625	2	6	5	3	..	..	..	..	..	..	..	4	1	6	22	84	5	8	55	144	30	63	29	39	..	9	..	..	4	5	..	(47)	4,261	
Rusholme	240	280	1,221	581	450	408	415	3	7	10	26	9	..	..	(30)	(18)	19	..	1	2	6	88	231	9	9	111	282	79	100	172	58	(28)	..	..	..	..	20	..	(46)	4,597	
St. Clement's	157	169	898	730	719	667	536	4	..	..	46	..	..	..	(23)	(10)	31	4	11	20	34	89	165	..	2	42	84	41	102	30	22	..	..	..	1	..	5	..	(53)	4,452	
St. George's—East	205	219	1,325	810	828	789	717	8	7	5	36	1	(1)	(1)	(5)	(3)	3	8	8	10	25	201	376	2	3	59	192	67	104	12	29	(6)	..	..	1	..	..	..	(50)	5,845	
,, —West	220	280	1,236	880	881	934	685	6	8	5	24	1	..	..	(31)	..	..	10	12	8	21	140	252	1	4	52	149	50	93	14	12	..	..	..	..	..	5	..	(51)	5,763	
St. John's	205	233	1,552	1,105	935	803	576	5	8	10	33	9	(1)	..	(42)	(22)	13	8	18	5	33	147	251	3	4	95	244	77	128	28	39	(46)	11	..	26	1	1	..	(47)	6,401	
St. Luke's—North	246	247	991	670	669	683	723	11	4	4	1	..	..	..	(111)	(47)	10	11	25	25	35	123	289	1	3	97	234	96	138	31	1	..	..	..	..	..	2	1	(50)	5,125	
,, —South	296	288	995	521	480	397	440	2	10	4	9	..	..	..	(1)	(3)	1	9	6	..	1	89	96	1	1	40	53	15	25	1	1	..	..	..	11	..	4	..	(41)	3,500	
St. Mark's—North	178	180	807	698	585	640	678	2	3	2	31	2	(1)	..	(20)	(13)	..	6	7	6	14	92	85	5	16	48	129	34	94	23	56	..	..	..	2	1	4	..	(63)	4,250	
,, —South	172	174	1,092	733	624	562	352	2	2	6	23	8	(1)	..	(20)	..	17	3	6	6	24	88	45	7	6	79	150	18	39	28	49	(3)	7	..	2	..	8	..	(46)	4,160	
St. Michael's—East	257	243	1,573	1,307	1,001	764	551	2	5	11	2	1	..	..	(2)	..	3	1	3	3	2	202	240	4	6	78	222	48	93	14	9	..	..	..	1	..	..	..	(53)	6,389	
,, —West	229	228	1,365	1,101	953	835	610	9	7	6	83	1	..	..	(34)	(3)	2	3	8	10	27	111	204	3	5	93	168	83	125	34	23	..	..	..	..	..	15	1	(51)	6,113	
District I.	225	234	924	545	552	455	500	1	3	6	58	..	(5)	..	(45)	(17)	..	1	4	8	17	50	114	2	5	36	119	38	64	18	18	..	1	..	3	..	4	..	(121)	3,780	
,, II.	187	160	634	456	434	334	324	1	6	2	26	..	(1)	..	(2)	..	..	2	3	3	4	35	38	1	..	37	57	37	47	25	17	..	..	..	3	4	8	4	(150)	2,702	These two Health Visitors have additional sessions at the centre.
Wilbraham Estate	145	111	639	450	380	341	256	1	2	..	3	..	..	..	..	..	..	1	1	..	..	87	43	1	2	1	10	4	9	..	1	..	..	..	..	..	..	..	(27)	2,343	
Withington	300	341	1,259	801	615	508	515	5	8	9	39	3	(2)	..	(4)	(8)	4	4	6	..	2	136	207	13	19	74	132	77	103	41	22	..	2	..	2	2	5	2	(30)	4,956	
Kingsway	284	355	758	619	478	311	419	1	8	6	1	3	..	..	..	..	..	..	..	2	2	222	205	14	28	103	169	77	103	51	19	..	..	2	..	2	1	..	(22)	3,959	
Moston II.	..	88	345	178	206	201	142	..	3	1	5	..	..	(1)	(6)	(4)	..	..	3	..	..	16	17	5	10	6	13	8	19	..	..	..	3	..	..	..	2	..	(2)	1,271	Assisting in Moston for three months.
Didsbury	..	81	469	331	300	247	233	..	3	2	20	6	..	..	(24)	(4)	1	1	3	..	8	73	147	4	2	8	48	11	18	2	1	(5)	1	..	3	..	..	..	(1)	2,023	District not continuously worked throughout the year.
Crumpsall	196	261	681	162	171	137	134	1	7	4	21	3	..	..	(6)	(3)	..	1	3	..	..	86	218	4	5	7	17	8	10	..	..	..	..	..	2	..	2	..	..	1,945	District worked only since July, 1929.
Measles I.	..	6	294	271	256	254	262	2	22	24	4	17	..	..	..	..	3	..	..	..	..	734	788	85	97	275	322	449	331	91	35	..	1	557	3	35	6	13	..	5,237	
,, II.	..	..	280	396	387	339	314	..	..	..	..	..	..	..	..	..	..	..	..	..	..	661	550	28	24	281	280	409	394	76	12	..	..	579	..	1	..	..	..	5,011	
,, III.	..	1	317	308	345	314	377	..	..	..	..	..	..	..	..	..	..	..	..	..	..	963	683	71	19	273	355	381	281	22	11	..	..	363	..	..	..	1	..	5,085	
,, IV.	..	6	164	243	256	273	263	..	5	..	..	..	(1)	..	(3)	(1)	..	1	..	..	..	894	704	34	34	172	171	257	156	25	2	..	1	244	..	12	..	..	..	3,917	
TOTALS	*11,346	*12,194	59,612	39,676	35,852	31,820	30,633	170	336	270	1,691	397	(37)	(5)	(1,195)	(647)	481	228	423	330	1,045	9,034	13,101	493	676	3,969	8,449	4,040	5,958	1,737	1,366	(178)	87	1,748	180	80	295	24	(2,667)	266,401	

* In addition there were 795 "Found Cases" to which "Primary" visits were paid. The bracketed figures are incidents, not actual visits.

CAUSES OF DEATH—1929. CHILDREN UNDER 12 MONTHS.

WARD	Number of Health Visitors working in the District	Number of Deaths of Children under 1 year of age	Bronchitis and Pneumonia	Prematurity	Debility and Marasmus	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths, including Want of Attention at Birth	Influenza	Measles	Whooping Cough	Other Causes
All Saints	2	45	11	10	1	9	1	..	1	..	..	..	4	8
Ardwick	3	61	15	11	..	8	3	1	..	1	1	4	5	12
Beswick	2	42	10	11	..	9	..	..	..	1	..	..	2	9
Blackley	1	26	5	9	1	1	1	..	..	..	..	..	..	9
Bradford	2	37	12	7	2	4	..	..	..	..	..	..	3	9
Cheetham	1	21	7	5	..	1	..	1	..	..	2	..	1	4
Chorlton-cum-Hardy	1	11	5	4	..	1	..	..	..	..	..	..	..	1
Collyhurst	3	60	18	12	2	12	1	1	..	..	..	1	3	10
Crumpsall	..	18	5	5	..	2	..	1	..	..	1	..	1	3
Didsbury	1	3	..	1	..	..	..	..	..	..	..	..	..	2
Gorton North	2	34	6	13	1	3	..	..	..	1	..	1	..	9
Gorton South	2	39	12	10	..	3	5	..	..	..	..	..	..	9
Harpurhey	2	36	10	9	1	4	..	1	..	..	..	..	2	9
Levenshulme	1	14	3	2	..	1	2	..	..	..	1	..	1	4
Longsight	1	20	2	8	1	2	2	1	..	..	..	..	..	4
Medlock Street	3	72	24	16	1	11	5	1	..	..	..	..	2	12
Miles Platting	3	58	12	7	1	6	3	1	..	1	1	1	7	18
Moston	1	18	..	9	..	..	..	..	1	..	..	..	..	8
Moss Side East	1	21	3	5	..	1	..	..	1	1	..	1	..	9
Moss Side West	1	26	6	8	2	1	..	..	..	..	..	..	1	8
New Cross	3	98	29	21	..	19	1	1	1	1	1	4	5	15
Newton Heath	2	25	6	5	..	5	1	1	1	..	1	..	2	3
Openshaw	1	26	6	5	..	3	..	..	..	..	..	..	2	10
Rusholme	1	21	4	5	..	2	2	..	..	..	1	1	..	6
St. Clement's	1	25	8	8	1	1	..	..	..	..	..	..	2	5
St. George's	2	71	27	11	3	10	2	..	..	..	..	2	5	11
St. John's	1	18	3	1	1	3	3	..	..	..	..	..	1	6
St. Luke's	2	76	16	14	3	17	2	..	1	..	..	1	8	14
St. Mark's	2	32	10	5	..	5	..	..	..	..	1	..	5	6
St. Mickael's	2	61	18	8	5	10	1	1	1	3	..	1	6	7
Withington	2	35	12	6	1	2	1	..	..	..	1	..	1	11
District I.	1	20	11	1	1	..	1	..	..	..	..	..	1	5
District II.	1	25	8	4	..	2	1	2	..	1	..	..	2	5
Total	54	1,195	324	256	28	158	38	13	7	10	11	17	72	261

DEATH OF CHILDREN AGED ONE TO TWO YEARS IN HEALTH VISITORS' DISTRICTS.—TABLE 4.

WARD	Number of Health Visitors working in the District	Number of Deaths among Children 1 to 2 years of age	CAUSES OF DEATH—1929. CHILDREN ONE TO TWO YEARS.										
			Bronchitis and Pneumonia	Debility and Marasmus	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	2	10	7	..	..	..	..	..	..	..	2	1	..
Ardwick	3	19	7	..	1	..	..	..	..	1	2	4	4
Beswick	2	16	9	..	1	..	..	..	..	..	3	3	..
Blackley	1	6	4	..	..	..	..	..	..	..	..	2	..
Bradford	2	12	7	..	..	..	..	..	..	..	2	1	2
Cheetham	1	8	3	..	1	..	..	..	..	..	..	1	3
Chorlton-cum-Hardy	1	4	2	..	..	..	1	..	..	1	..	..	..
Collyhurst	3	19	9	..	2	..	1	..	1	1	1	3	1
Crumpsall	..	2	1	..	..	..	..	..	..	..	..	1	..
Didsbury	1	1	..	..	..	..	..	..	..	..	..	..	1
Gorton North	2	3	2	..	..	..	..	..	..	..	1	..	..
Gorton South	2	10	3	..	..	..	2	..	1	..	..	3	1
Harpurhey	2	15	7	..	..	..	2	..	..	..	3	2	1
Levenshulme	1	..	..	..	..	..	..	..	..	..	..	..	..
Longsight	1	2	..	1	..	..	1	..	..	..	..	..	..
Medlock Street	3	15	9	..	1	..	..	..	..	..	3	2	..
Miles Platting	3	32	14	..	2	..	..	..	2	..	3	7	4
Moston	1	8	2	..	..	1	..	..	..	..	1	4	..
Moss Side East	1	6	4	..	..	..	..	..	..	..	..	..	2
Moss Side West	1	6	2	..	1	..	2	..	..	..	..	..	1
New Cross	3	35	21	..	4	1	1	..	1	..	..	4	3
Newton Heath	2	7	5	..	..	..	..	..	..	..	..	1	1
Openshaw	1	11	7	..	..	..	1	..	1	..	..	2	..
Rusholme	1	3	1	..	..	..	..	..	..	..	..	1	1
St. Clement's	1	6	4	..	..	..	..	..	..	..	..	2	..
St. George's	2	31	14	..	1	1	..	..	1	..	2	6	6
St. John's	1	5	3	..	..	..	..	..	..	..	..	1	1
St. Luke's	2	18	11	..	1	..	..	..	..	..	1	4	1
St. Mark's	2	17	5	..	..	..	..	..	1	..	1	4	6
St. Mickael's	2	32	17	..	1	..	1	..	..	..	1	9	3
Withington	2	10	6	..	1	..	1	..	..	1	..	1	..
District I.	1	6	1	..	..	..	1	..	..	..	1	2	1
District II.	1	11	5	..	..	..	..	..	..	..	..	3	3

WARD	Number of Health Visitors working in the District	Number of Deaths among Children 2 to 5 years of age	Bronchitis and Pneumonia	Debility and Marasmus	Enteritis	Convulsions	Tuberculosis	Syphilis	Accidental Deaths	Influenza	Measles	Whooping Cough	Other Causes
All Saints	2	14	4	..	..	..	..	..	1	2	1	1	5
Ardwick	3	13	2	..	..	..	2	..	..	..	1	6	2
Beswick	2	15	8	..	..	..	1	..	1	1	..	2	2
Blackley	1	6	..	..	..	..	..	..	..	1	..	2	3
Bradford	2	11	5	..	..	..	..	..	..	1	1	3	1
Cheetham	1	..	..	..	..	..	..	..	..	..	..	..	..
Chorlton-cum-Hardy	1	5	..	..	..	..	1	..	2	..	..	..	2
Collyhurst	3	15	5	..	..	..	1	..	..	..	1	5	3
Crumpsall	..	1	..	..	..	..	1	..	..	..	..	..	..
Didsbury	1	..	..	..	..	..	..	..	..	..	..	..	..
Gorton North	2	5	2	..	..	..	..	..	1	..	2	..	..
Gorton South	2	4	1	..	..	..	1	..	..	..	..	..	2
Harpurhey	2	8	2	..	..	..	2	..	..	1	..	..	3
Levenshulme	1	5	..	..	..	..	1	..	..	..	..	2	2
Longsight	1	4	..	..	..	..	1	..	..	1	..	1	1
Medlock Street	3	16	7	..	..	..	1	..	1	..	..	2	5
Miles Platting	3	12	4	..	..	..	1	..	..	1	..	4	2
Moston	1	7	2	..	..	..	1	..	..	..	..	1	3
Moss Side East..	1	5	..	..	..	..	..	..	..	..	1	..	4
Moss Side West	1	2	..	..	..	..	..	..	..	..	..	..	2
New Cross	3	19	9	..	..	..	1	..	1	..	1	4	3
Newton Heath	2	7	3	..	..	..	1	..	..	..	..	..	3
Openshaw	1	8	3	..	..	..	..	..	..	1	..	2	2
Rusholme	1	5	..	..	1	..	1	..	1	1	..	1	..
St. Clement's	1	7	..	..	1	..	..	..	1	..	..	2	3
St. George's	2	21	10	..	1	1	..	..	1	1	1	2	4
St. John's	1	3	..	..	..	..	..	..	..	..	..	2	1
St. Luke's	2	26	5	..	..	..	2	..	..	1	3	9	6
St. Mark's	2	5	2	..	..	..	..	..	1	..	..	..	2
St. Michael's	2	13	6	..	..	..	..	..	1	1	..	2	3
Withington..	2	8	1	..	..	..	1	..	1	..	..	2	3
District I.	1	11	5	..	..	..	..	..	1	2	..	3	..
District II...	1	4	..	..	..	..	..	..	2	..	1	..	1
Total	54	285	86	..	3	1	20	..	16	15	13	58	73

TABLE 5.—SUMMER DIARRHŒA. CASES VISITED BY THE HEALTH VISITORS IN 1929 (CHILDREN UNDER 5 YEARS), COMPARED WITH THOSE VISITED DURING THE FOUR PRECEDING YEARS, 1925, 1926, 1927, AND 1928.

	Year				
	1925	1926	1927	1928	1929
Total number of cases visited	425	370	194	196	183
Number of cases occurring in—					
July (15th–31st)	58	53	30	52	48
August	248	155	86	69	61
September	119	162	78	75	74
Cases in Wards.					
All Saints	18	12	6	8	8
Ardwick	13	21	12	7	6
Beswick	29	24	13	15	10
Blackley	..	2	1	1	2
Bradford	26	15	6	9	11
Collyhurst	16	13	7	10	10
Crumpsall	..	..	..	..	2
Gorton North	41	6	6	2	..
Gorton South	13	5	8	10	4
Harpurhey	4	6	5	8	7
Levenshulme	..	4	8	3	3
Longsight	4	2	..	..	1
Medlock Street	20	27	14	14	18
Miles Platting	26	10	3	6	8
Moston	1	5	8	2	5
Moss Side East	6	5	5	5	..
Moss Side West	2	7	5	7	4
New Cross	52	51	19	19	13
Newton Heath	..	5	1	2	6
Openshaw	8	4	1	..	3
Rusholme	10	19	11	12	15
St. Clement's..	9	14	2	4	4
St. George's	43	34	14	20	16
St. John's	10	14	12	10	10
St. Luke's	18	10	5	1	4
St. Mark's	21	16	6	2	4
St. Michael's	19	10	6	11	7
Withington, Didsbury, and Chorlton-cum-Hardy	5	5	2	1	2
Number affected under 1 year of age	224	194	112	104	102
Method of feeding at onset of illness—					
Breast	53	38	32	19	17
Mixed	25	17	14	13	14
Hand	146	139	66	72	71
Deaths—					
Total number	72	69	38	31	32
Number under 1 year of age	61	59	33	27	25
Number under 4 months of age	24	25	18	17	12

REPORT ON THE WORK OF THE MIDWIVES' DEPARTMENT FOR THE YEAR 1929.

Inspection of Midwives.

No. of midwives who notified intention to practice		219
No. practising in City but resident outside		21
No. of bona-fide midwives practising in the City		4
No. of midwives who—		
Died		1
Removed from area		19
Gave up work		8
Were removed from roll		0
No. of births attended by midwives	as midwife 6,626 as maternity nurse 1,228	7,854
No. of births registered		13,032
Per cent. attended by midwives		60
Total No. of births in institutions and registered maternity homes		4,748
Home addresses outside Manchester area		1,080
No. of visits paid to midwives		953
No. of midwives interviewed at office		187

Puerperal Fever and Pyrexia.

During the year 1929, 144 cases of puerperal fever and 80 cases of puerperal pyrexia were notified. In 15 of these cases the diagnosis was later changed—4 from puerperal fever to puerperal pyrexia, 9 from puerperal pyrexia to puerperal fever, and 1 from puerperal pyrexia to scarlet fever, which gives a total of 149 cases of puerperal fever and 74 cases of puerperal pyrexia.

The average for puerperal fever during the previous 24 years (1905-1928) is 140. Of the 149 cases of puerperal fever, 43 occurred after abortion or premature labour. Of the abortions, 31 were at the second or third month of gestation, 8 at the fourth month, 1 at the fifth, 2 at the sixth, and 1 at the seventh month of pregnancy.

This number includes 16 cases from outside districts, which were delivered in hospital, having been sent in owing to some abnormal condition of pregnancy or labour. 8 of these cases proved fatal.

The total fatal cases numbered 24, of which 4 were cases of abortion.

Public Health Notification of Puerperal Fever and Puerperal Pyrexia Regulations, 1926.

These regulations provide for a second opinion in doubtful cases.

The Public Health Committee agreed to pay a sum of £3 3s. for each consultation, provided that the consultants be selected from the list of approved practitioners engaged solely in gynæcological and obstetric practice in the city.

In connection with the above provision, 15 applications for payment of fee were received.

	£	s.	d.
Amount of fees paid	53	11	0
Amount recovered from people who were in a position to pay	6	6	0

The attack-rate per 1,000 births was 11·43, against 11·39 in 1928, whilst the case fatality per cent. was 16·1, against 19·99, the average for the 24 years 1905–28.

The mortality from puerperal fever per 1,000 births was 1·84, against an average of 1·74 in the preceding 10 years.

Table relating to the cases of puerperal fever attended either by midwives or doctors during 1929.

Year	Number of Cases attended by							
	Midwives		Doctors, including cases of abortion		Midwife and Doctor		Institution	
	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
1929	47	10	61	8	6	0	35	6

Of the 35 institution cases, 8 had received treatment prior to admission to hospital.

Out of 149 cases which were notified during 1929, 111 were removed to Monsall Hospital, and 86 recovered. 29 cases were treated in other institutions, and 21 of these recovered. Of the 9 cases which were nursed at home all recovered.

The particulars as to the character of the labour, and the results for 1929, are :—

	Number of Cases	Recovery	Death
Normal full-term labour	56	43	13
Abnormal full-term labour	50	43	7
Abortion or premature	43	39	4

Of the 13 fatal cases of normal full-term labour, the cause of death was in two instances due to pulmonary embolism.

PUERPERAL PYREXIA.

Of the 74 cases of puerperal pyrexia, 4 occurred after abortion at the second month of gestation, 1 at the third month, 1 at the fourth month, 2 at the fifth month, and 1 at the seventh month of gestation. 22 patients were nursed at home and 21 recovered. The cause of death was pneumonia. 36 cases were removed to Monsall Hospital and recovered. The remaining 16 were treated in other institutions, of these 15 recovered and one died, the cause of death being due to hypostatic pneumonia.

TABLE RELATING TO CASES OF PUERPERAL PYREXIA ATTENDED EITHER BY MIDWIVES OR DOCTORS FROM JANUARY TO DECEMBER, 1929.

Number of Cases attended by						Institution Cases	
Midwives		Doctor		Midwife and Doctor			
Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
22	1	20	..	11	..	21	1

The particulars as to the character of labour, and the results, are :—

	Number of Cases	Recovery	Death
Normal full-term labour	37	37	..
Abnormal full-term labour	28	27	1
Abortion or premature	9	8	1

This number includes 3 cases from outside districts, which were delivered in hospital, having been sent in owing to some abnormal condition of pregnancy or labour.

Subsequent visits have been paid to 94 women who had suffered from puerperal pyrexia or fever. 72 were found to be in good health. In 3 instances the mothers were found to be again pregnant.

PEMPHIGUS NEONATORUM.

In September, 1925, the Manchester City Council made an order declaring pemphigus neonatorum to be a notifiable disease under the Infectious Disease (Notification) Act, 1889, for a period of six months as from September 10th, 1925, since which date an annual renewal of the order has been made.

87 cases of pemphigus neonatorum were reported, 38 of these cases being infants under 11 days old. The remainder occurred at the following ages:—23 at 2 weeks, 12 at 3 weeks, 5 at 4 weeks, and 4 under 3 months. The total fatal cases were 5.

76 of these cases were nursed by the Special Nurses.

The following table shows the number of cases of pemphigus neonatorum occurring in the practice of midwives, doctors, and institutions:—

Year	Midwives		Doctors		Midwives and Doctors		Institutions	
	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths	Attacks	Deaths
1929	47	1	26	2	2	..	13	1

Of the 88 cases reported, 72 were of a very mild character, the skin condition becoming normal in periods ranging from 1 to 3 weeks. In 9 cases, however, although the lesions were small and superficial, 4 weeks elapsed before the skin condition became quite clear. In 4 of these infants a condition of slight conjunctivitis was present.

The remaining 6 cases were of a more serious type, 4 proved fatal. 2 of these infants were premature, and death occurred within 48 hours of the onset of the disease. 2 made a good recovery.

The 87 cases reported include 2 epidemics, which occurred in separate practices. The first consisted of a group of 9 cases, 2 of which were of a serious nature. These 2 infants also suffered from a septic condition of the umbilicus. The intervals between the cases varied from 1 to 12 days, the lesions were confined to the face and arms in 7 cases, and in 2 cases spread over the whole of the body. The second epidemic consisted of a group of 15 cases, which occurred during a period of 6 weeks, 14 of which were of a very mild type, the skin condition becoming normal within 10 days of the onset. In the remaining case, although the lesions spread over the whole of the body, the infant made a good recovery.

MATERNAL DEATHS.

During the year 1929, 51 maternal deaths from causes other than puerperal sepsis were reported. The causes given are set out in the following table :—

Dystocia (complicated labour)	2	Ruptured ectopic gestation . .	1
Eclamptic conditions	6	Ruptured uterus	3
Post-partum hæmorrhage . .	3	Diabetic coma	1
Ante-partum hæmorrhage . .	8	Pneumonia and other chest conditions	9
Pulmonary embolism	5	Puerperal insanity	2
Coronary embolism	1	Abortion	2
Post-operative shock	1	Cardiac conditions	4
Hyperemisis gravidarum . .	3		

In accordance with the request of the Ministry of Health a medical enquiry has been made in each of the above deaths, the result of which has been duly forwarded to the Maternal Mortality Committee.

SUSPENSION OF MIDWIVES.

223 suspensions of midwives from their work occurred, chiefly on account of their having been in attendance on cases of puerperal infection or other infectious conditions.

COMPENSATION TO MIDWIVES DURING SUSPENSION.

Section 2 (1) of the Midwives and Maternity Homes Act, 1926, gives a midwife who is suspended from practice in order to prevent the spread of infection a right to recover reasonable compensation from the local authority.

During the year 15 claims were paid. It was thought advisable in 4 instances where midwives had been in contact with cases of puerperal sepsis, that they should be suspended pending the result of a swab taken from the throat and nose.

In 1 case hæmolytic streptococci were isolated, and it was found necessary to suspend this midwife for a period of three months.

RECORDS OF CALLING IN MEDICAL AID.

The number of medical records received was 3,369, as compared with 3,430 in the previous year. The numbers under the various reasons given for having advised medical aid correspond to those in previous years (see page 176).

Number of Cases occurring in 1929 in which the Midwife advised that a Registered Medical Practitioner should be sent for (Rule E). Also the Number of Applications from Medical Practitioners for Payment of their Fees for Attending Certain Emergency Cases.

Period	Medical aid called in on account of the following causes, as stated by the Midwife			Total	*Application for Fees
Pregnancy	Pelvic Measurements			9	..
	Vaginal discharge			27	3
	Puffiness of hands, face, etc.			30	2
	Excessive sickness			22	3
	Abortions, miscarriages			26	12
	Deformed pelvis			1	7
	Loss of blood			93	1
	Dangerous varicose veins			18	4
	Albumenuria			71	20
	Other unusual features of pregnancy			202	43
Labour ..	Presentations	Head—Malpositions		19	18
		Breech	In primiparæ	8	5
			In multiparæ	6	..
			Para not stated	36	35
		Transverse		4	11
		Funis		10	2
		Unable to make out		8	..
		Footling		9	4
		Hand		9	7
	Delayed labour	Forceps used		..	231
		No record as to forceps		539	128
	Placenta	Retained		38	34
		Adherent		19	14
		Prævia		9	35
	Membranes retained			34	12
	Rupture of perineum			733	425
	Hæmorrhage ..	Ante partum		23	31
		Post partum		50	37
		Hæmorrhage—3rd stage		2	..
	Convulsions			3	1
	Complications			102	19
	Premature labour			24	5
Lying-in ..	Secondary post-partum hæmorrhage			7	..
	Rigor			3	..
	Rise of temperature above 100·4° F.			70	44
	Swelling or inflammation of breasts			19	5
	Progress unsatisfactory or complications			227	58
Newly-born Child	Injuries received during birth			3	1
	Obvious malformations			34	18
	Tongue-tied			62	10
	Feebleness of child			109	51
	Inflammation of eyes and eyelids			268	109
	Unsatisfactory skin condition			48	9
	Illness from prematurity			49	36
	Jaundice			47	13
	Inflammation about the umbilicus			14	7
	Unspecified			184	31
	Convulsions			8	5
	Pemphigus neonatorum			23	13
	Totals			3,369	1,562

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* These applications have been classified according to the conditions requiring treatment found by the medical practitioner.

In addition to the above cases referred to medical practitioners, 433 cases were referred to the pre-maternity clinics by midwives.

MIDWIVES ACT, 1918—MEDICAL ASSISTANCE TO MIDWIFE IN CASE OF EMERGENCY.

Under Section 14 (1) of this Act a midwife is required, in case of any emergency as defined in the rules, to call in to her assistance a registered medical practitioner, and the local supervising authority is required to pay such medical practitioner a fee as prescribed by the Ministry of Health. The local supervising authority has power to recover the fee from the patient or husband unless they are unable, by reason of poverty, to pay such fee.

Particulars of applications from medical practitioners for the payment of their fees :—

	1929
No. of families whose incomes were below the scale.. ..	359
No. of families whose incomes were above the scale.. ..	1,039
No. of families who paid doctor themselves	29
Conditions not fulfilled	44
No account sent (see Ophthalmia Neonatorum Regulations, 1926)	91
No. paid by Local Supervising Authority	1,489
	£ s. d.
Amount of fees paid	1,780 18 0
Amount recovered from people who were in a position to pay	646 4 3

STILL-BIRTHS.

On January 1st, 1928, compulsory notification of still-births came into force. All still-births are also registered through the District Registrar, copies of which are received at the Public Health Office. The figures, therefore, for this year are a true return of the total number of still-births occurring in the city during the year.

	No. reported	No. in practice of			
		Doctors and Institutions	Midwives	Midwives and Doctors	Percentage to total births
1929	758	483	154	121	5·8

The summary of causes to which it seemed reasonable to credit the still-births occurring in the practices of midwives shows the principal numbers to be :—

	1929
Definite history of ill-health of the mother	6
Albuminuria of pregnancy	20
Congenital deformities	9
Other toxæmias of pregnancy	25
Breech presentations, full time and premature	15
Prolapse of cord	1
Ante-partum hæmorrhage	6
Probable specific disease from family history	6
Twin pregnancies—full time and premature	6
Abnormal presentations	5
Difficult delivery	4

The still-birth rate was highest in St. Luke's, Newton Heath, Beswick, and St. Mark's.

Subsequent visits have been paid at intervals of 6 months to 225 cases of still-birth which have occurred since June, 1928, in the practices of midwives. Analysis of immediately succeeding pregnancies is as follows :—It was found that in 2 instances the mother had aborted, and in 9 instances the mother had given birth to a still-born child. Four of these mothers had received medical attention during pregnancy on account of an unsatisfactory condition of their general health, 1 had medical supervision at an ante-natal clinic, 1 mother was sent to hospital at the eighth month on account of ante-partum hæmorrhage due to placenta prævia, 3 had no medical supervision. In 29 instances, however, the pregnancy ended in a healthy living child, in 1 instance the infant had a condition of spina bifida and lived ½ hour. In addition to this number 16 mothers were found to be pregnant—the pregnancy had not come to full term at the time of the visit.

DEATHS OF NEW-BORN CHILDREN.

115 deaths of newly-born infants occurring in the practices of midwives were notified, in accordance with Rule E 22 (*b*) of the Central Midwives Board. Of these, 7 occurred before a medical practitioner could be obtained.

In 2 instances an inquest was held, the cause of death being returned as 1 natural causes and 1 asphyxia, due to being overlaid. In 5 cases the City Coroner did not consider it necessary to hold inquests.

CHARGES OF MALPRACTICE, NEGLIGENCE, OR MISCONDUCT.

No serious breach of the rules of the Central Midwives Board was reported during the year. In a small number of instances where there had been a slight infringement of the rules a verbal caution was deemed to be sufficient.

POST GRADUATE INSTRUCTION FOR MIDWIVES.

During the year a further series of lectures was given at the Public Health Office to practising midwives. These lectures, which were given by the Medical Officer of Health and other recognised specialists, dealt with midwifery and other subjects of interest and help to the midwives.

The lectures were very largely attended. The subjects chosen invoked the keenest interest. There is no doubt that these post graduate courses are most helpful to the midwives; evidence of this is shown by a marked improvement in the ante-natal work.

During the year one midwife who was desirous of obtaining the Teacher's Certificate was given a course of lectures at the Midwives Institute, London, A grant of 50 per cent. of the expenses incurred was made to her.

WORK OF THE SPECIAL NURSES.

The work done by the nurses during the year 1929 has been tabulated, and is as follows:—

Still-births investigated	290
Deaths of newly-born infants investigated	7
Nursing visits paid to Puerperal Fever and Pyrexia cases, also other cases of raised temperature	1,211
Visits to old Puerperal Fever and Pyrexia cases to ascertain subsequent histories	236
New Puerperal Fever cases investigated to ascertain histories.	102
Investigation visits paid to notified cases of Puerperal Pyrexia	27
Nursing visits paid to cases of Mammary Abscess and Mastitis	200
Nursing visits paid to cases of Phlebitis	43
Nursing visits paid to cases of Phlegmasia Alba Dolens ..	31
Carried forward	2,147

Work of the Special Nurses—continued

Brought forward	2,1
Nursing visits paid to cases of Pneumonia and other chest affections	1
Nursing visits paid to cases of houses infected with Scarlet Fever	1
Nursing visits paid to cases of houses infected with Diphtheria	1
Nursing visits paid to cases of houses infected with Measles	
Nursing visits paid to cases owing to septic skin condition of mother	8
Number of cases of Pemphigus Neonatorum and other skin affection in newly-born infants	15
Nursing visits paid to these infants	1,13
Number of nursing visits paid to cases of Spina Bifida	5
Number of nursing visits paid to cases of Septic and unsatisfactory Umbilicus	1,02
Number of nursing visits paid to cases of Ophthalmia Neonatorum	11
Number of nursing visits paid to cases of unsatisfactory conditions of Perineum	2
Subsequent visits to cases of Still-birth including further visits to those cases where a condition of pregnancy was found	60
Special investigation visits concerning medical records and payment of medical fees	59
Special visits to infants on account of unsatisfactory conditions	97
Special investigation visits into maternal deaths	70
Unclassified nursing visits paid to mothers and infants	147
	5,879

CHILD WELFARE AND ANTE-NATAL CENTRES.

The table on page 183 shows in statistical form the work done at the Child Welfare Centres during the year 1929. The corresponding figures for the year 1928 are given for comparison. The attendances at the Ante-natal Clinics have increased from 4,800 in 1928 to 8,155 in 1929.

EXPECTANT MOTHERS REPORT, 1929.

	No. on Register, January 1st, 1929	No. of new cases	Total	No. still on Register, January 1st, 1930	No. of term births	No. of prem. births	No. of still-births	No. of mothers left district before confinement	No. of mothers not pregnant	Total
. .. .	64	299	363	63	186	37	7	35	35	363
. .. .	37	152	189	44	111	1	13	4	16	189
.. ..	34	276	310	45	248	3	5	2	7	310
. .. .	36	176	212	39	143	16	3	4	7	212
.. ..	—	66	66	16	43	2	1	1	3	66
eath	29	135	164	36	99	1	2	3	23	164
pon-Medlock .	28	129	157	39	94	2	8	1	13	157
. .. .	25	67	92	24	48	3	2	6	9	92
.. ..	33	187	220	49	139	11	2	6	13	220
. .. .	—	134	134	40	64	9	9	2	10	134
.. ..	30	144	174	35	109	5	1	8	16	174
.. ..	60	201	261	72	157	4	9	6	13	261
otals .. .	376	1,966	2,342	502	1,441	94	62	78	165	2,342

Still-births (per 1,000 births) City Rate .. .. .. 58·2
,, (per 1,000 births) who attended A.N. Clinic 38·82

Centre	No. of Normal Births	No. of Abnormal Births	Died	Attended for Post-natal examination
ncoats	149	15	2	23
rdwick	191	39	1	164
orton	107	13	1	54
arpurhey	36	10	1	3
ulme	50	3	—	1
usholme	126	26	—	66
ewton Heath	89	11	—	31
layton	64	18	—	36
heetham	107	8	—	28
penshaw	153	17	1	28
ollyhurst	227	29	—	1
horlton-upon-Medlock ..	84	20	—	12
	1,383	209	6	447

In January a new centre was opened at 26, Clayton Street, Clayton, at which two infant clinics and one ante-natal clinic are held, also two massage sessions and a remedial exercises class for toddlers. Also in January an ante-natal clinic was started at the Harpurhey Centre.

In October a remedial exercise class was started for toddlers at the Rusholme Centre.

In July an experimental cookery class was started by the Superintendent at Newton Heath Centre. This proved a success, and arrangements have been made to hold cookery classes at three centres, in charge of trained cookery teachers, in the new year.

The good relations existing between the Schools for Mothers and the Maternity and Child Welfare Committee have continued.

The sale of accouchement outfits was continued. These outfits are sold at cost price, *i.e.*, 6s. 2d. each, and can be obtained at the Public Health Office and at the Child Welfare Centres. Mothers attending the Child Welfare Centres, by paying a small weekly sum, are able to obtain an outfit on the completion of the payment of the total cost. During 1929, 104 outfits have been sold.

ARTIFICIAL SUNLIGHT TREATMENT, 1929.

During the year 738 children were treated at the Ultra-Violet Light Clinics. 99 adults were also sent for treatment.

Of these, 350 ceased to attend before their treatment was completed and 326 were discharged on completion of their course.

The total number of treatments given during the year was 15,400.

The lamp used was the Hanovia evacuated air-cooled mercury vapour lamp, and general irradiations were given in all cases for a period of from 1 to 6 months.

The children sent for treatment were suffering principally from rickets, general debility, malnutrition, and debility following some infectious disease, catarrh, bronchitis, nervousness, and a few cases of rheumatism and asthma. Results, on the whole, were distinctly good.

A disappointing feature in the work of the clinics was the large number who ceased to attend, but on enquiry into the reasons for this it was found to be unavoidable in most cases.

Cases of rickets all improved in general health. Those treated for malnutrition often showed no improvement during the course of treatment, but began to improve noticeably on cessation of the treatment. Results in the cases of asthma were surprisingly good, but only a small number were treated. The tonic effect was very evident in the case of children suffering from debility following measles and pneumonia, nervous children suffering from insomnia, enuresis, sleep walking, nightmares ; stammering also improved very much and in most instances the children lost all their nervous manifestations.

The adults treated included nursing mothers and expectant mothers suffering from insomnia, debility, and extreme depression. The improvement in the mental attitude of such patients was one of the most marked features of the treatment.

	Year	C.-on-M.	Openshaw	Ancoats	Collyhurst	West Gorto	Cheetham	Hulme	Ardwick	Abbey He	Newton He	Harpurhey	Elm Stree	Holy Nam	Rusholm	Levenshulm	Clayton	Total
Number of weighings of babies	1928	14,560	19,929	13,611	13,807	17,177	10,554	11,451	22,760	5,548	11,485	11,258	6,003	942	13,458	7.128	—	179,671
	1929	12,713	16,272	11,119	13.507	14,939	9.801	9,192	18,622	5,128	10,973	10,190	5,751	1,330	14,625	8,023	5.001	167,186
Number of New Cases	1928	792	978	708	734	903	555	589	1,050	223	548	545	361	56	745	319	..	9,106
	1929	804	835	678	661	823	586	526	945	250	628	600	356	75	814	433	630	9,084
Number of Consultations	1928	5.583	8,610	4,642	4,752	6,818	3,960	3,984	8,312	2,296	4,847	3,831	2,335	498	4,886	3,026	..	68,380
	1929	5,536	7,437	4,183	5,197	6.422	3,740	3,593	7,275	2,051	4,769	3,891	2,080	688	5,298	2,978	1,933	67,071
Number of Attendances for Massage	1928	1,597	2,908	1,792	2,093	1.607	1,484	913	1,393	510	1,450	967	615	..	..	..	..	17,329
	1929	2,406	2,793	1,908	1,783	1,573	1,422	891	1,644	499	1,464	1.087	865	..	*1,089	..	*1,180	*20.604
Number of Attendances for Sunlight	1928	3,078	..	..	..	..	3,345	..	4,013	..	940	..	..	..	..	..	..	11,376
	1929	4.606	..	..	..	..	2,996	..	4,942	..	2,793	..	..	..	..	..	..	15,337
Visits to Homes by Superintendents	1928	425	457	570	468	497	797	530	205	242	500	324	586	4,249	474	778	..	11,102
	1929	496	171	271	191	391	357	244	39	53	209	110	638	2,969	178	709	1.040	8,066
Individuals who attended Centres	1928	1,555	2,251	1,400	1,382	1,679	1,224	1,164	2,000	471	1,143	1,157	614	100	1,390	736	..	17,266
	1929	1,321	1,977	1,088	1,123	1,352	936	849	1.586	436	992	981	568	142	1,254	664	649	16,918
Number of Attendances at Ante-natal Clinics	1928	400	512	395	627	525	446	496	936	..	359	..	..	..	‡104	..	..	4,800
	1929	572	576	933	732	701	845	394	1,212	..	600	†207	..	..	900	..	483	8,155
Number of Attendances at Dental Clinic	1928	737	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	737
	1929	901	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	901
Number of Attendances at Venereal Disease Clinics	1928	..	..	..	..	..	..	1,010	550	..	..	..	..	..	..	..	..	1,560
	1929	..	..	..	..	..	..	660	709	..	..	..	..	..	..	..	..	1,369

* Including 373 attendances for remedial exercises.

† From April 13th, 1929.

PROVISION OF MILK FREE OR AT REDUCED COST DURING THE YEAR 1929 COMPARED WITH THE YEAR 1928.

Statement showing Number of Cases receiving Milk, Amount Supplied, Cost, and Mode of Distribution.

Centre		Number of New Cases put on Milk		Attendances of persons for Milk		Amount of Milk Supplied (Pints or Lbs.)		Total Cost to Corporation		Total
		Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	Fresh Milk	Dried Milk	Fresh and Dried Milk
								£ s. d.	£ s. d.	£ s. d.
70–72, Rosamond Street West	1929	141	130	3,371	2,746	23,597	2,951	274 17 4	181 14 10	456 12 2
	1928	224	139	4,745	3,992	33,795	4,429	332 5 6	250 7 0	582 12 6
1–3, Manipur Street	1929	196	124	4,405	3.354	31,026	3,696	322 17 10	198 16 8	521 14 6
	1928	294	116	7,763	4,010	55,295	4,290	511 5 4	208 4 0	719 9 4
153, Cheetham Hill Road	1929	78	54	1,488	1.104	10,414	1,160	116 7 0	75 13 8	192 0 8
	1928	85	51	2,177	1,251	15,642	1,443	158 8 4	81 5 8	239 14 0
135, Pollard Street	1929	174	92	3,529	2,477	24,833	2.685	289 17 6	168 0 1	457 17 7
	1928	325	148	6,076	3,825	43,472	4.315	412 6 7	242 16 2	655 2 9
93, Hamilton Street	1929	111	120	3,609	3,294	25,439	3,689	293 8 10	223 13 5	517 2 3
	1928	165	65	4,736	3,843	33,681	4,285	325 9 0	250 19 3	576 8 3
230, Hyde Road, West Gorton	1929	218	111	4.029	3.128	28,263	3,559	322 3 4	217 13 4	539 16 8
	1928	258	117	4,915	3.953	34,433	4,149	336 12 11	224 8 0	561 0 11
40–42, Lower Moss Lane	1929	90	94	2,155	2,457	15.267	2,678	171 10 10	161 8 4	332 19 2
	1928	169	100	3,520	2,716	24,950	3,228	247 14 10	162 1 9	409 16 7
45, Higher Ardwick	1929	97	207	2,971	4,516	20,912	4,629	238 19 0	277 4 4	516 3 6
	1928	272	159	7.739	5,439	55,250	6,188	514 2 4	343 9 10	857 12 2
Jubilee Schools, Harpurhey	1929	109	50	1,677	1,302	11,746	1,485	127 7 0	84 7 2	211 14 2
	1928	125	25	3,024	1,593	21,397	1,783	201 15 10	108 19 2	310 15 0
686–8, Oldham Road, Newton Heath	1929	50	28	685	898	4,798	977	50 18 6	48 12 1	99 10 7
	1928	88	52	1,657	1,070	11,777	1,233	96 14 1	60 8 2	157 2 3
Abbey Hey Lane	1929	41	22	693	653	4,983	730	45 17 4	38 8 7	84 5 11
	1928	47	27	1,243	884	8,725	927	71 12 4	47 14 9	119 7 1
Elm Street School	1929	53	58	1,084	782	7,605	858	79 16 2	43 9 10	123 6 0
	1928	84	85	1,659	1,720	12,929	2,009	103 12 9	93 8 4	197 1 1
Chorlton-cum-Hardy	1929	4	..	182	1	1,274	..	16 8 7	....	16 8 7
	1928	3	..	259	..	1,825	..	16 19 0	....	16 19 0
Rusholme	1929	123	79	2,639	1,509	18.459	1,544	195 3 6	37 7 7	282 11 1
	1928	139	60	3,065	1,360	21,737	1,573	207 13 7	78 4 6	285 18 1
Levenshulme	1929	20	30	891	434	6,367	463	63 0 4	24 3 0	87 1 4
	1928	47	15	1,233	365	8,645	379	75 11 4	15 6 8	90 18 0
Clayton	1929	29	56	313	865	2,317	933	26 12 8	56 6 4	82 19 0
	1928	..	..	..	..	..	..	....	....	....
Total	1929	1,544	1,245	33,721						

COMPARISON OF CHILDREN IN AGE GROUPS ATTENDING THE CHILD WELFARE CENTRES.

Centre	On Register at beginning of year			New patients			Transferred from age group	Transferred from other Centres	Transferred to other Centres	Died	Marked off not attending			On Register, January 1st, 1930		
	0—1	1—2	2—5	0—1	1—2	2—5					0—1	1—2	2—5	0—1	1—2	2—5
Abbey Hey	118	93	90	158	28	42	325	22	12	5	14	95	129	109	90	85
Ancoats	281	246	316	420	106	133	823	43	39	44	48	257	395	289	180	234
Ardwick	462	294	355	619	117	191	1,139	31	72	48	79	338	433	399	303	324
Cheetham	275	227	186	409	76	91	755	7	21	8	52	263	284	248	184	178
Chorlton-cum-Hardy	82	68	79	160	12	23	252	7	14	—	2	55	62	114	76	93
Clayton	—	—	—	263	86	191	283	109	19	6	30	55	105	141	110	163
Chorlton-upon-Medlock ..	329	257	280	523	91	169	956	41	48	42	79	285	419	313	210	227
Collyhurst	271	192	214	487	80	130	750	23	23	51	44	221	257	334	181	239
Didsbury	79	49	32	143	22	22	201	14	7	2	12	45	66	107	75	45
Gorton	413	215	326	546	127	130	997	39	60	29	54	359	370	388	225	248
Harpurhey	240	163	179	383	91	104	646	23	27	18	48	164	214	269	198	202
Holy Name	30	15	15	56	12	13	86	1	2	3	2	27	22	33	28	23
Hulme	248	229	182	377	62	73	685	22	36	46	48	210	275	236	159	152
Levenshulme	150	104	123	309	42	55	406	25	34	7	30	127	118	211	124	133
Miles Platting	147	134	88	238	46	53	400	13	17	32	32	129	146	159	84	108
Newton Heath	231	169	244	399	76	137	699	12	28	12	49	210	269	248	168	227
Openshaw	454	312	372	551	114	154	1,073	37	137	46	87	347	433	364	228	293
Rusholme	343	243	230	554	103	121	876	55	48	16	74	299	293	380	249	236
Withington	143	112	81	310	45	60	425	58	28	6	44	114	148	202	140	113
Totals	4,266	3,122	3,392	6,905	1,336	1,892	11,777	582	672	421	828	3,600	4,438	4,544	3,012	3,323

COMPARISON OF REGISTERED BIRTHS AND BABIES UNDER 1 YEAR ATTENDING THE CENTRES DURING 1929.

Ward	Births	New cases at Centres under 1 year	Per cent.
All Saints	457	229	50·11
Ardwick	565	411	72·74
Beswick	533	220	41·27
Blackley	266	141	53·01
Bradford	500	394	78·8
Cheetham	363	168	46·28
Chorlton-cum-Hardy	458	202	44·10
Collegiate Church	296	152	51·35
Collyhurst	550	290	52·72
Crumpsall	206	71	34·46
Didsbury	245	95	38·77
Exchange	1	—	—
Gorton North	335	184	54·92
,, South	495	203	41·01
Harpurhey	365	196	53·69
Levenshulme	241	178	73·86
Longsight	292	166	56·84
Medlock Street	644	326	50·62
Miles Platting..	555	287	51·71
Moston	369	150	40·65
Moss Side East	291	181	62·2
Moss Side West	258	148	57·36
New Cross	702	338	48·18
Newton Heath	313	199	63·57
Openshaw	403	227	56·32
Oxford	15	—	—
Rusholme	278	174	62·59
St. Ann's..	—	—	—
St. Clement's	148	83	56·08
St. George's	559	273	48·83
St. John's	96	32	33·33
St. Luke's	542	301	55·53
St. Mark's	444	197	44·37
St. Michael's	470	224	47·66
Withington	777	332	42·72
Totals	13,032	6,772	51·11

NURSING HOMES REGISTRATION ACT, 1927.

During the year 1929, 6 new applications were received and 6 from homes already registered under the Maternity Homes Act, 1921. Of the former, 3 were registered and of the latter, 4. 44 visits were paid.

In connection with applications received in 1928, 49 visits were paid and 10 of these homes registered.

Seven homes registered under the Maternity Homes Act, 1921, were automatically registered under the new Act. In connection with these, 8 visits were paid.

Four visits were also paid to three houses reported as being used as maternity homes. One did not come within the meaning of the Act and in no case was any action necessary.

The total registrations for 1929 were 24 and the total number of visits 105.

Two registrations were cancelled owing to the keepers leaving the premises.

SUBSIDISATION OF MATERNITY BEDS.

The Manchester City Council at a meeting on March 7th, 1928, sanctioned the arrangements for subsidising 6 municipal maternity beds, 2 in St. Mary's Hospital for first and abnormal cases, 2 in Denison House, and 2 in Crossley Hospital.

During the year 1929, 192 applications were received. 41 of these were cancelled, 5 were not accepted as the applicants were unsuitable, and 2 resided outside Manchester. Of the remaining 145 applicants, 95 were confined during the year.

SUMMARY OF WORK OF INVESTIGATORS FOR 1929.

No. of visits in connection with :—		
Milk Investigations—New cases	3,575	9,408
,, ,, Reinvestigations	5,833	
Dinner Investigations—For Expectant and Nursing Mothers, and Children	552	882
Dinner Reinvestigations	330	
Medical Fees—New cases	1,796	2,446
,, ,, Reinvestigations	650	
Investigation visits *re* Home helps..		116
Investigation visits *re* Maternity Beds		231
Total visits		13,083
Centre Work :—		
Milk Clerk's duties		65½ days
Office Work :—		
Clerical duties		48 days
Total		113½ days

HOME HELPS.

The Manchester Home Helps Society has been in existence for about four years. The Society is subsidised by the Public Health Committee.

During the year 1929, 22 individual helps attended 103 cases for a total of 217 weeks, or an average of 2·1 weeks per case.

The amount recovered in fees was £157 19s. 5d.

The Helps are remunerated at the rate of 30s. per week, plus travelling expenses and insurance. No pay when unemployed.

All the cases referred by the Corporation to the Home Helps Society (20 attended for 44 weeks) received the services of Home Helps free of charge.

Cases dealt with by the Society itself paid the costs of the Home Helps to the extent shown in the following table :—

Cases	No. of Weeks Attended	Rate per Week	Amount Paid by Patient
		£ s. d.	£ s. d.
4	9	1 15 0	15 15 0
1	3	1 14 1	5 2 3
26	54	1 10 0	81 0 0
1	2	1 7 6	2 15 0
10	23	1 0 0	23 0 0
9	19	15 0	14 5 0
1	2	12 6	1 5 0
7	11½	10 0	5 15 10
3	6	7 6	2 5 0
10	21	5 0	4 5 0
2	4	4 0	0 16 0
1	2	3 6	0 7 0
4	8	2 6	1 0 0
1	2	2 2	0 4 4
1	2	2 0	0 4 0
2	5	Free	0 0 0
81	168		£157 19 5

Applications are made either through the Infant Welfare Centres or direct to the Secretary of the Home Helps Society. All applications are investigated by officers of the Maternity and Child Welfare Department. If not suitable for a free Home Help, in accordance with a scale applicable to grants of milk under the Child Welfare Scheme, the information is passed on to the Secretary of the Society, who assesses payment.

OPHTHALMIA NEONATORUM.

During the year 1929, 672 cases of inflammation of the eyes were notified from various sources, and visited by the eye nurses.

Of these, 338 were cases of disease in children. 202 suffered from simple and 54 from purulent conjunctivitis, 18 from blepharitis, 25 lacrymal obstruction, and 1 keratitis; 6 were cases of corneal ulcer, 16 had nebula of cornea, and 1 case of blindness in one eye following accident; 1 staphyloma, 6 congenital cataract, 2 dacryocystitis, 1 colobona iris, 1 case of congenital blindness of one eye, 2 cases of congenital blindness of both eyes, and 2 cases of phlyctenule.

During the year 3 children were maintained in the Sunshine Home for Blind Babies at Southport. Two of these children (brothers) suffered from a congenital absence of lens, the other child suffered from blindness following meningitis. The maintenance of 2 of these children has now been transferred to the Education Department owing to their having attained the age of 5 years.

334 cases of inflammation of the eyes of newly-born children occurred; 137 were notified by the medical attendants (either private or at the Royal Eye Hospital) as cases of ophthalmia neonatorum. The remaining 197 cases were notified by midwives, by medical record, as having called in medical aid for unsatisfactory eye condition of the newly-born infant.

Swabs were taken from the conjunctiva in all cases where possible, and sent to the Public Health Laboratory to be examined bacteriologically for the presence of gonococcus. Twenty-six swabs were examined, and of these 8 gave a positive result. In cases where the result of the swab was positive the mothers were advised to seek medical advice either from their own doctor or from the Clinic.

Since June, 1928, 9 mothers have been revisited after an interval of six months, in cases where the result was positive.

It was ascertained that 2 of these mothers were having medical treatment for discharge and 2 for their general health. Two had removed from the district, 3 were in good health and stated they had no discharge.

Twenty-one mothers were revisited where the examination of the swab showed the presence of pus cells. Seven of these mothers had a history of discharge, in 5 cases the discharge had cleared without treatment, 1 had removed from the area, and 1 was advised to obtain medical advice as a condition of slight discharge was still present.

Of the remaining 14, 2 were under medical treatment for their general health and 1 had removed from the district.

The other mothers were all in good health and stated they had no discharge.

Table A shows the distribution of cases, both as regards the districts in which they occurred and the month of the year. The cases in which the cornea was affected are also shown in this table.

The largest number of cases of ophthalmia neonatorum occurred in the wards of New Cross, Collyhurst, and St. Luke's

The monthly rate of notified cases varies considerably, and there seems no special reason for the rise and fall in numbers. July and April head the list, followed by June.

TABLE A, 1929—NOTIFIED CASES OF OPHTHALMIA NEONATORUM, ALSO CASES REPORTED BY MIDWIVES BUT CONSIDERED TO BE CASES OF CONJUNCTIVITIS.

Month of Year	January	February	March	April	May	June	July	August	September	October	November	December	Total	Cases of Conjunctivitis reported by Midwives	Cases with Corneal Complications
All Saints	2	1	..	..	2	1	2	1	..	..	..	1	10	3	1
Ardwick	2	..	..	..	..	..	..	..	..	1	1	..	4	8	..
Beswick	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..
Blackley	1	..	..	..	..	..	2	..	..	..	..	..	3	5	1
Bradford	..	..	..	2	..	..	1	..	..	..	..	..	3	8	..
Cheetham	1	2	..	..	1	..	..	1	..	..	..	..	5	4	..
Chorlton-cum-Hardy	..	..	1	..	..	..	..	..	..	1	..	..	2	2	..
Collegiate Church	..	..	1	..	1	1	..	..	..	..	..	..	3	3	..
Collyhurst	1	..	1	1	2	3	4	1	..	..	1	1	15	22	1
Crumpsall	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Didsbury	..	..	..	..	..	..	..	..	..	..	..	..	5	3	..
Gorton—N.	..	..	1	2	1	..	..	..	..	..	1	..	7	5	1
Gorton—S.	..	2	..	2	..	..	1	..	2	..	..	..	4	12	1
Harpurhey	..	1	..	..	..	2	..	..	..	..	..	1	2	8	..
Levenshulme	..	1	..	..	..	..	..	..	..	..	1	..	2	8	..
Longsight	..	..	..	..	..	1	..	..	..	..	..	1	4	2	..
Medlock Street	..	..	..	1	..	..	1	1	1	..	..	..	4	11	..
Miles Platting	1	..	1	1	1	..	..	..	..	..	..	..	6	9	..
Moston	..	1	..	1	..	1	..	..	1	..	..	2	4	3	..
Moss Side—E.	..	..	..	1	..	..	1	1	..	..	1	..	..	5	..
Moss Side—W.	..	..	..	..	..	..	..	..	..	..	..	..	16	..	..
New Cross	1	..	3	1	..	1	2	..	3	2	3	..	..	15	1
Newton Heath	..	..	..	..	..	1	..	..	2	1	..	..	4	2	..
Openshaw	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..
Rusholme	2	..	..	..	..	1	..	..	..	..	2	..	5	3	..
St. Clement's	..	..	..	..	..	..	..	..	3	..	..	..	3	1	..
St. George's	..	..	..	..	..	..	..	..	..	1	1	1	3	6	..
St. John's	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
St. Luke's	..	..	2	1	1	1	4	..	..	1	1	1	12	4	..
St. Mark's	..	..	..	..	..	..	..	2	..	..	1	..	3	9	..
St. Michael's	..	..	..	1	..	1	1	..	..	..	..	..	3	20	..
Withington	..	1	..	1	1	..	1	..	1	..	..	..	5	3	..
Totals	11	9	10	15	10	14	20	7	13	7	13	8	137	197	..
Cases with Corneal Complications	1	1	..	..	..	..	1	..	1	..	2	..	..	..	6

TABLE B—1929. OPHTHALMIA NEONATORUM AND CONJUNCTIVITIS. HISTORY OF MOTHER.

	Age of Mother							Parity										Labour		Attendant not present at birth	No. of mothers having had previous cases of Ophth. Neon.	History of yellow discharge	Legitimacy	
	Under 20	20—	25—	30—	35 and Over	Not ascertained	Total	1	2	3	4	5	6	7	8	9+	Not Ascertained	Normal	Abnormal				Legit.	Illegit.
Notified Cases ...	4	26	42	30	33	2	137	1	24	22	24	10	11	8	1	6	1	125	12	17	11	9	129	8
Not Notified	4	35	59	47	52	—	197	46	47	28	21	17	8	11	11	8	—	177	20	7	11	5	193	4
Corneal Cases ...	—	1	4	–	1	—	6	—	3	2	1	—	—	—	—	—	—	3	3	1	2	2	5	1

Total cases notified 137
Total cases not notified 197
334

TABLE C—1929. OPHTHALMIA NEONATORUM.

	Interval in days between birth and onset											Attended by				Where treated				
	1	2	3	4	5	6	7	8	9	10+	Total	Midwife	Doctor	Midwife and Doctor	Total	Home	Out-Patients at Hospital	In-Patients at Hospital	No Doctor	Total
Notified Cases ...	7	7	14	5	9	13	15	14	16	37	137	89	37	11	137	89	40	8	—	137
Not notified	3	10	8	13	18	20	39	17	15	54	197	173	—	24	197	190	4	2	1	197

Total cases notified	137
Total cases not notified ...	197

Table C shows the day of onset, the attendant at birth, and the place of treatment.

The greatest number of onsets were on the sixth and seventh days of life, and in over one-half of the cases the first signs of disease appeared after the first five days.

279 cases were treated by private doctors and 54 received treatment at the Royal Eye Hospital.

In 6 instances there was involvement of the cornea, and of these 4 cases were admitted into the Royal Eye Hospital.

The number of cases with corneal involvement was 6 in all, being an increase of 2 on last year. One has completely recovered, 1 has nebula cornea (which will clear), and 1* has a stapyloma. One case removed and 2 cases died during treatment.

TABLE D.—CASES WITH INVOLVEMENT OF THE CORNEA.

	1928	1929
Right Eye..	2	4
Left Eye	2	1
Both Eyes..	..	1
	4	6

---

* This mother went to an outside district for her confinement. Ophthalmia neonatorum developed on the 8th day. She returned to Manchester 3 months later.

Table E shows the results of the 137 cases of ophthalmia neonatorum and of the 197 of conjunctivitis in *newly-born infants.*

	Complete recovery	One Eye blind, other normal	One Eye blind, the other damaged	Both Eyes lost	Both Eyes damaged	One Eye damaged	Death before recovery	Removed before recovery	TOTALS
Ophthalmia Neonatorum	128	1	..	..	..	..	5	3	137
Conjunctivitis ..	184	1 (Congenital Atrophthalsos)	..	..	..	..	9	2	197

Table F showing the total number of cases of ophthalmia and conjunctivitis in newly-born infants, and the percentage with corneal complications. 1911-1929:—

Year	No. of Cases	Percentage with Corneal complications
1911	525	7·23
1912	667	11·39
1913	573	12·04
1914	681	9·25
1915	642	7·79
1916	620	6·13
1917	539	6·86
1918	567	8·64
1919	698	4·73
1920	974	4·83
1921	921	2·28
1922	760	1·84
1923	836	1·20
1924	853	1·41
1925	849	0·82
1926	855	1·52
1927	802	1·49
1928	681	0·59
1929	672	0·89

PUBLIC HEALTH (MEAT) REGULATIONS, 1924.

These regulations, which came into force on May 1st, 1925, are administered by the Public Health Committee in so far as Part V., which relates to shops, stores, etc., is concerned. With a view to the equitable administration of the regulations, the co-operation of the interested trades was sought, and mutual agreement with the associations concerned was arrived at on the following points :—

Requirements.

1. Meat shall not be hung outside premises.
2. All meat which is displayed must be protected from the dust of the streets by glass windows.
3. Reasonable precautions must be taken to protect meat from flies.
4. The provision of a covered receptacle of suitable material for refuse and sweepings is imperative, and the receptacle must be kept clean.
5. Shops must be adequately ventilated.

Suggestions.

1. That means be adopted for keeping all prepared meats covered. (Transparent paper could be used with good effects.)
2. That each shop be provided with a cold store or ice box for the storage of meat.
3. Persons engaged in the sale or handling of meat should wear white overalls. (Coloured ones now in use when worn out to be replaced by white.)
4. That notices be exhibited in shops to the effect that foodstuffs should not be handled by customers.
5. That, wherever possible, vertical glass fronts be provided on counters to protect meat, etc., from contact with or handling by customers.
6. Particulars of structural arrangements required in premises where food is prepared may be obtained on application to the Medical Officer of Health.

These agreed conditions have greatly facilitated the administration of the Meat Regulations. This strikingly illustrates the value of conference between the Public Health Committee and accredited representatives of interested trades as a preliminary to administration of such regulations.

2,420 visits were paid during the year to meat shops by the special inspectors, and it was found that these requirements and suggestions were generally being carried out.

In 14 cases a cautionary letter was necessary. In one instance court proceedings had to be taken under Section 20 of the Regulations, for the exposure of meat at open windows, and a penalty of 20s. was imposed.

BAKEHOUSES AND OTHER PREMISES IN WHICH FOOD IS PREPARED.

The total number of visits made by inspectors to bakehouses during the year was 1,227, and their routine work is referred to on page 206.

Visits were made in connection with 47 applications for approval of the use of premises as bakehouses, with the result that 10 were considered unsuitable and 37 were approved, subject to the fulfilment of certain conditions.

Fifty applications for sanction to the establishment of fish frying businesses were considered by the Public Health Committee. Thirteen were granted subject to the requirements of the Medical Officer of Health being completed satisfactorily, and 37 were refused on the grounds of unsuitability of the premises or the site.

Supervision of all places where food is prepared has been maintained, and minor alterations and improvements have been obtained in many cases without formal notice. In certain cases more extensive alterations have been required, and these have been dealt with by serving a specification prepared by the Housing Manager, with the following results:—

Nature of Business	Ward	Date Specification sent out	Result up to December 31st, 1929
Butchers	St. Mark's ..	18-7-29	Work in progress.
Sausage Factory ..	New Cross ..	20-2-29	Work completed.
,, ..	Beswick	23-8-29	Discontinued.
Bakery	Crumpsall ..	19-4-29	,,
Butchers	St. George's ..	Amended Specification, May, 1929	Completed
Cooking of Meats ..	Bradford	29-10-29	Work in progress.
Lodging House ..	Moss Side East .	8-1-26	Completed.
Tripe Shop and Restaurant ..	Oxford	17-5-29	In abeyance.
Butchers	Collegiate Ch. ..	1-7-29	Work in progress.
,, ...	Gorton South ..	12-2-29	,,
Sausage Factory ..	Collegiate Ch. ..	24-1-29	Completed.

SPECIAL INSPECTORS' REPORT, 1929.

Visits *re* Public Health (Meat) Regulations, 1924	2,420
„ „ Other Food Shops	156
„ „ Food Hawkers' Premises	71
„ „ Specifications of Work required at Meat Shops	17
„ „ Prosecutions at the City Police Courts	1
„ „ Unauthorised Markets	4
„ „ Food Poisoning	19
„ „ Gas Poisoning	7
„ „ Export of Old Clothes, Washed Mutton Cloths, and Rags	67
„ „ Smallpox	58
„ „ Enteric Fever	13
„ „ Favus in Kittens and Mice	27
„ „ Public Conveniences	26
„ „ Miscellaneous Complaints	285
Specimens submitted for examination at the Public Health Laboratory:—	
Food Poisoning	4
Favus	13
Water Supply	2
Housing Statistics (Days)	198
Child Welfare Film „	54
Health Exhibitions „	108

REPORT OF THE SANITARY SECTION.

10,412 complaints were received during the year of which 2,757 were from the Medical Officer of Health, 6,256 from the public, 83 from H.M. Inspector of Factories, 40 from the Police, and 1,276 from various other sources. (See Table 1.)

The District Inspectors made 147,581 inspections of various premises, etc., arising out of which 4,392 reports were sent to the Medical Officer of Health and 5,327 to various Committees. (See Table 2.)

9,703 notices were issued during the year under the Public Health, Housing, and Local Acts and Bye-laws, and 9,534 were complied with. (See Table 3.)

OFFENSIVE TRADES.

The number of offensive trades on the register is 826. These have been placed under close supervision and 2,582 inspections have been made. (See Table 4.)

ACTION TAKEN IN CASES OF DEFAULT.

240 cases of non-compliance with notices, etc., were reported to the Committee. Legal proceedings were taken in 18 instances, and fines amounting to £1 10s. were imposed in 4 cases, 1 Magistrates' Order granted, 11 ordered to pay costs only, and 1 withdrawn. Total amount of costs £3 8s. In 1 case the Magistrates imposed a fine of 10s., but this was not to be enforced if the conditions were changed within 7 days, the defendant complied with these conditions. In the remaining 222 cases the notices, etc., were complied with after preliminary action. (See Table 5.)

WORKSHOPS, BAKEHOUSES, SHOPS ACTS, AND ORDERS MADE THEREUNDER.

4,005 inspections under the Factory and Workshops Act of 1901 have been made. The provision of means of escape in case of fire in factories and workshops has received attention, and all known cases of danger have been dealt with.

There are 661 bakehouses in the City (46 in basement premises) and 1,227 inspections have been made.

10,760 inspections have been made of the 19,920 shops on the register. (See Table 6.) There have been no additions to the orders of exemption from compulsory closing made in 33 trades, the orders fixing the weekly half-holiday in 6 trades and the orders fixing the closing day in the several days of the week in 3 trades. (See Table 7.)

Twenty infringements of the Factory and Workshops, and Shops Acts were reported to the Committee, and in 1 case legal proceedings was ordered, a penalty of £1 was imposed, the remaining cases being cautioned by the Committee. (See Table 8.)

5,275 visits have been paid by the Female Inspector to houses in various parts of the City in which outwork is carried on; constant visitation is necessary to maintain the standard of cleanliness desired, especially in houses in which shirt-making, handkerchief-hemming, brace-making, and umbrella covering is done.

The people, as a rule, appear willing to carry out any suggestion to keep their houses clean, but it is not always possible for small houses, sometimes containing large families, to be kept in a satisfactory condition as workshops. (See Tables 6 and 9.)

Table 10 is the Annual Report on the administration of the Factory and Workshop Act, 1901, as required by the Home Office.

HOUSES LET IN LODGINGS.

2,183 day and 34 night inspections were made of the 2,104 registered houses.

5 infringements of the Bye-laws were reported to the Committee; 2 were cautioned and 3 summoned before the Magistrates, who imposed fines in all cases amounting to £1 10s. and costs 10s. (See Table 11.)

Table 12 is a summarised statement of the work done by the District Inspectors.

SMOKE NUISANCES.

1,866 timed observations have been taken and 102 offences were reported to the Committee. Of these 27 were cautioned and 75 ordered to be summoned before the Magistrates, who imposed fines in 60 instances which totalled £122 10s., 2 were ordered to pay costs only (10s.), 12 orders of abatement were granted (costs in connection therewith £4 16s.), and 1 withdrawn.

In addition to the above, 102 notices for the abatement of nuisances were served and in 185 cases firms were cautioned by the inspectors for the emission of black smoke of less than two minutes duration. (See Table 13.)

ADULTERATION OF FOOD AND DRUGS.

3,399 samples have been taken, of which 135 were reported to be adulterated. Magisterial proceedings were taken in 30 cases, fines amounting to £45 5s. being imposed in 28 instances, 1 ordered to pay costs only, and 1 withdrawn. The total costs were £32 5s. 11 cases were cautioned by the Committee and no action was taken in the remaining 94 as the adulteration was slight or the sample taken informally.

The percentage of samples adulterated was 3·97 as compared with 5·90 in 1928.

1,351 samples of milk were analysed, of which 119 were certified to be adulterated. No certificates were issued in 89 cases as the adulteration was slight or the sample had been taken informally. The percentage of milk samples adulterated, including those not certified, was 8.81 as compared with 13.61 in 1928. (See Table 14.)

THE PUBLIC HEALTH (PRESERVATIVES IN FOOD) REGULATIONS, 1925-27.

During the year the provisions of the Regulations have been enforced and all appropriate samples have been examined for the presence of preservative.

The following sample was found not to conform to the requirements of the Regulations:—

Cream.

Sample No. 1395C contained 0.25 per cent. of boric acid.

Legal proceedings were instituted and a fine of £2 was imposed with costs (10s. 6d.).

CANAL BOATS ACTS.

There are 415 canal boats on the register and 1,813 inspections have been made. Notices were served on the owners or masters of 9 boats, 8 of which have been complied with, 4 cautionary letters have been sent, and in 33 cases the Inspector verbally cautioned the owners or masters for infringements, all of which were attended to.

RAG FLOCK ACT, 1911.

161 visits have been made and 49 samples taken, of which 7 did not conform to the standard of cleanliness prescribed by the Act. Magisterial proceedings were taken in 3 cases, a fine of £5 (costs £3 3s.) imposed in 1 instance, the remaining summonses were withdrawn and the manufacturer fined on a summons taken out by one of the defendants in accordance with section 3 ot the Act, and 1 case was cautioned by the Committee. In the remaining 3 instances no further action was taken.

FABRICS (MISDESCRIPTION) ACT, 1913.

29 visits under the provisions of the Act have been made, but no samples taken, as in no case would the vendor declare the material to be non-inflammable.

POISONS AND PHARMACY ACT, 1908.

Under this Act and the Regulations made thereunder 32 licences have been renewed and 2 new licences issued.

HOUSING AND UNHEALTHY DWELLINGS.

80,731 inspections and reinspections of houses have been made, irrespective of those made under the provisions of the Housing Act ; 5,740 dwelling-houses were rendered fit as a result of the service of informal notices.

Under Section 3 of the Housing Act, 1925, 893 dwelling-houses were dealt with by notices, 783 being rendered fit (708 by owners and 75 by the Local Authority in default).

1,168 dwelling-houses were dealt with by notices issued under the Public Health Acts, the majority of which were rendered fit.

The number of houses certified and dealt with by the Committee from 1885 to December, 1929, is 27,467.

Owing to the prevailing conditions with regard to housing shortage only 4 cases of "Houses unfit for habitation" were certified, but in one or two isolated instances the Chief Inspector recertified the houses where no alteration had been carried out and the property had become dangerous. (See Table 15.)

CLOSET ACCOMMODATION.

During the year 18 pail-closets were altered to water-closets. These conversions have been accompanied by the necessary alterations in house drains, passage drains, paving of passages, and in the houses themselves.

The number of pail-closets still in existence is 514 in connection with dwelling-houses and 262 in connection with business premises, recreation grounds, etc.

Practically the whole of the former are in connection with derelict property which cannot be dealt with immediately owing to the house shortage, and the latter to a great extent are situate in places where sewers are not available.

There are only 56 midden-privies left in the City.

Since 1891 the total number of pail-closets, midden-privies, and slopwater-closets altered to water-closets under the supervision of this section are as follows:—

Pail-closets	58,739
Midden-privies	26,203
Slopwater-closets	553
Total	85,495

The number of water-closets in Manchester is estimated (at December 31st, 1929) to be 252,237, of which 197,653 are in houses and 54,684 are in warehouses, workshops, etc.

DRAINAGE BRANCH.

The drainage branch has, after notice or at the request of the owners, dealt with 691 dwelling-houses and 271 business premises at a cost of £9,805 11s. 2d., of which amount £8,499 6s. 9d. was charged to the owners and the remainder (£1,306 4s. 5d.) to the City Fund. (See Table 16.)

PUBLIC CONVENIENCES.

There are 23 public conveniences for males and 19 for females, and during the financial year ended 31st March, 1930, the receipts were £7,135 8s. 10d. (See Table 17.) In addition there are 95 public urinals within the city.

Several schemes for the erection of public conveniences are under consideration and endeavours are being made to acquire suitable sites in areas where the accommodation is inadequate.

MUNICIPAL HOSTELS.

"Ashton House" with 210 beds has been well patronised during the financial year ended 31st March, 1930, accommodation being found for 69,791 persons, an average of 191 per night. The charges are 10d. and 1s. per night or 5s. and 6s. per week, and the turnover, including catering, was £3,994 7s. 10d.

"Walton House" has accommodation of 467 residents at a charge of 1s. per night or 6s. 6d. per week. The total number of beds occupied was 169,948, an average of 466 per night. The receipts amounted to £15,612 12s. 11d., including catering.

TABLE NO. I.—SHOWING THE NUMBER OF COMPLAINTS RECEIVED.

MUNICIPAL WARD	Medical Officer of Health	Sanitary Inspector's	Cleansing Department	Surveyor's Department	H.M. Inspector of Factories	Police	Public	Others	Anonymous	Total
All Saints	109	1	20	2	3	1	305	1	3	4
Ardwick	146	97	23	1	1	9	279	1	6	5
Beswick	159	15	8	1	1	2	181	..	..	3
Blackley	27	3	19	..	..	1	83	..	..	1
Bradford	158	1	15	1	..	..	158	..	1	3
Cheetham	46	24	3	1	3	..	273	..	2	3
Chorlton-cum-Hardy ..	28	1	5	..	..	..	226	1	..	2
Collegiate Church ..	112	170	..	2	17	..	248	..	..	5
Collyhurst	136	..	4	4	..	3	140	..	5	2
Crumpsall	29	19	17	2	1	..	110	..	..	1
Didsbury	27	2	10	1	..	..	137	..	..	1
Exchange	4	..	..	..	4	..	11	..	1	2
Gorton North	100	..	42	..	..	..	244	..	..	3
Gorton South	122	7	9	2	..	1	242	..	..	3
Harpurhey	57	..	6	..	..	..	148	..	3	21
Levenshulme	40	1	35	1	..	..	113	..	..	19
Longsight	30	26	18	..	..	1	180	..	..	25
Medlock Street	117	2	12	3	..	..	173	..	..	30
Miles Platting	90	29	..	1	3	..	180	1	..	30
Moston	46	3	2	1	..	..	104	..	..	15
Moss Side East	34	58	2	1	1	..	282	..	3	38
Moss Side West.. ..	26	10	1	1	1	..	176	..	3	21
New Cross	231	52	29	4	4	14	329	2	17	68
Newton Heath	84	9	10	1	4	1	226	..	1	33
Openshaw	124	4	19	3	..	..	128	..	..	27
Oxford	8	1	2	2	5	1	45	..	..	6
Rusholme	63	36	34	2	..	..	208	..	..	34
St. Ann's	8	4	..	..	10	..	16	..	..	3
St. Clement's	67	..	8	..	7	..	85	..	..	10
St. George's	86	68	2	2	3	..	348	..	7	51
St. John's	54	36	1	..	8	4	115	..	1	21
St. Luke's	100	13	16	1	1	..	246	..	3	38
St. Mark's	131	24	39	..	..	..	233	..	3	43
St. Michael's	85	6	9	..	6	2	173	1	1	28
Withington	73	. 7	14	5	..	..	111	..	1	211
TOTALS.. ..	2,757	729	434	45	83	40	6,256	7	61	10,412

MUNICIPAL WARD	Dwelling-houses und Housing Ac	Dwelling-houses	Business Premises	Offensive Trades	Schools	Stables	Cellars	Houses Let Lodgings	Slaughter-houses	Tips	Sanitary Accommodat at Parks	New Buildings	Shops	Factories a Workshop	Bakehouse	Miscellanec Inspection	Investigati *re* Infectio Diseases	Inspections Infected Houses	Total Inspection etc.	Infected Ro Disinfecte	Drains Test by Water	Reports sent Medical Offi of Health	Reports se to Othe Committe
All Saints	330	1922	4	38	3	171	..	167	..	..	..	20	309	37	40	90	232	603	3966	160	50	109	179
Ardwick	1343	1974	176	149	5	356	1	160	..	21	21	..	411	146	18	328	289	1093	6491	619	35	211	412
Beswick	1073	1899	79	140	2	116	..	18	..	..	13	3	165	30	35	79	422	1065	5139	415	32	173	207
Blackley	257	482	..	35	1	140	..	20	..	22	29	4	383	23	35	46	205	530	2212	224	61	77	42
Bradford ..	337	1925	38	144	5	183	..	27	..	38	31	..	218	1	8	73	378	973	4379	347	35	243	114
Cheetham ..	427	1180	38	45	..	246	..	55	..	95	22	69	146	58	14	27	244	650	3316	195	64	164	190
Chorlton-c.-H ..	2089	1828	38	61	1	224	..	18	..	..	27	159	225	27	47	105	369	944	6162	440	200	61	128
Collegiate Ch...	275	1664	52	42	..	356	..	544	..	38	9	..	30	324	16	63	204	1116	4733	128	21	161	144
Collyhurst ..	1041	1265	29	75	6	101	..	22	..	..	6	..	623	80	39	191	336	1115	4929	494	31	203	387
Crumpsall ..	360	1181	30	29	..	312	..	14	..	12	67	152	131	20	25	66	138	339	2876	214	179	145	45
Didsbury ..	392	662	34	33	4	365	..	10	..	32	64	369	227	196	144	48	136	441	3157	150	379	168	67
Exchange ..	7	8	309	13	..	..	..	6	..	..	..	..	4	396	..	18	8	14	783	4	7	4	14
Gorton North ..	911	1619	..	57	..	306	..	2	..	6	11	5	212	30	48	19	219	1058	4503	596	24	112	114
Gorton South ..	..	1410	32	75	..	265	..	..	..	50	39	23	417	47	66	38	439	1166	4067	491	54	203	75
Harpurhey ..	476	1106	18	57	..	115	..	61	..	29	36	8	305	47	51	97	350	907	3663	487	11	115	159
Levenshulme ..	287	1197	68	61	4	387	..	12	..	17	24	41	353	95	69	58	310	632	3615	211	44	181	74
Longsight ..	819	2934	62	93	5	227	..	40	..	37	15	82	260	64	67	150	297	879	6031	332	160	119	126
Medlock Street .	479	2859	77	115	..	181	..	70	..	..	..	..	225	29	18	111	332	1158	5654	367	24	109	238
Miles Platting .	579	1296	123	83	8	146	..	20	..	..	22	..	704	113	30	114	427	1612	5277	577	22	110	222
Moston	244	893	1	70	..	94	..	1	..	48	22	58	435	19	9	68	276	924	3162	163	68	118	109
Moss Side East	145	1663	24	100	4	192	..	97	..	..	24	21	337	125	66	136	179	583	3696	275	14	56	199
Moss Side West	468	3257	5	50	..	176	..	5	..	..	..	51	706	49	65	357	256	684	6129	318	74	57	303
New Cross ..	573	2854	14	178	6	238	..	212	1	..	37	9	790	46	17	73	382	1348	6778	879	100	295	149
Newton Heath	544	1025	14	88	..	138	..	6	..	51	43	28	328	43	16	292	225	787	3628	382	34	175	117
Openshaw ..	474	1942	9	108	4	149	..	7	..	24	10	8	81	2	18	68	300	991	4195	442	37	176	106
Oxford	..	49	708	13	3	113	..	13	..	..	..	8	163	300	19	62	35	41	1527	7	38	21	41
Rusholme ..	1055	1425	37	77	3	294	..	18	..	..	21	72	419	73	64	128	234	552	4472	259	92	92	153
St. Ann's ..	..	1	302	..	..	..	3	..	..	..	..	3	124	323	8	14	25	11	814	8	3	7	18
St. Clement's ..	..	536	213	49	..	100	1	9	..	..	..	9	106	93	12	31	103	371	1633	121	22	67	42
St. George's ..	2010	3544	136	104	..	317	..	70	..	..	8	..	86	53	33	327	374	1069	8131	314	7	93	343
St. John's ..	388	650	431	36	1	236	26	106	..	21	..	24	129	366	4	40	32	200	2690	75	20	58	85
St. Luke's ..	282	1279	1	103	..	373	..	157	..	..	9	1	158	50	26	66	216	849	3570	204	22	115	115
St. Mark's ..	1005	2810	168	109	10	269	..	3	..	..	17	..	207	32	36	57	377	1177	6277	403	82	143	276
St. Michael's ..	1071	1128	56	87	2	151	1	244	..	..	11	..	145	169	17	25	229	1102	4438	364	4	94	217
Withington ..	667	1112	112	65	1	268	..	3	..	..	38	932	340	57	47	91	587	1168	5488	428	817	157	117
TOTALS ..	20408	52579	3438	2582	78	7305	32	2217	1	541	676	2159	9902	3563	1227	3556	9165	28152	147581	11093	2867	4392	5327

In addition to the above the District Inspectors made 10,298 visits of a miscellaneous character, and the Female Factories, etc., inspector made 858 Inspections of shops, 442 of factories and workshops, 5,275 houses of outworkers, and 82 inspections of sanitary accommodation for females at Parks.

TABLE NO. 3.—SHOWING THE NUMBER OF NOTICES ISSUED AND COMPLIED WITH UN THE PUBLIC HEALTH, HOUSING, FACTORY AND WORKSHOP, AND THE VARIOUS LOC ACTS AND BYE-LAWS DURING 1929.

ACT OF PARLIAMENT	WORK REQUIRED TO BE DONE	Number of Notices issued	Numb of Noti compli with
P.H. Act, 1875, S. 41, and P.H. Act Amend. Act, 1890, S. 19	Reconstruction of drains	335	314
P.H. Act, 1875, S. 23	Provide sufficient drains	3	9
Manchester Improvement Act, 1845, S. 46 ..	Open, cleanse, etc., drains	1,116	1,088
P.H. Act, 1875, S. 36	Provide ashbins, repair water-closets, etc. ..	469	462
P.H. Act, 1875, S. 91	To abate nuisances	185	193
Manchester Corporation Waterworks and Improvements Act, 1869, Sec. 29	Renew defective downspouts and gutters ..	1,065	1,007
Manchester New Streets Act, 1853, Sec. 41..	Flagging of yards and passages..	355	401
Manchester New Streets Act, 1853, S. 41, and Manchester Corporation Act, 1891, S. 38	Repairs to surfaces of yards and passages ..	1,278	1,327
P.H. Act Amendment Act, 1907, S. 49.. ..	Provide sinks and drains, etc.	5	5
Manchester Corporation Waterworks and Improvements Acts, 1867–1869	Repairs to privies, etc.	500	489
Housing Act, 1925	General repairs to houses, internal and external	532	443
Manchester Corporation Waterworks and Improvement Act, 1869, S. 31	Discontinue keeping swine	..	..
Manchester Police Act, 1844, S. 86	Cleanse and limewash houses	60	58
P.H. Act, 1875, S. 91–94; Factory and Workshops Acts, 1878–1901	To remedy defects in Workshops	31	30
Factory and Workshops Act, 1901, S. 2, and P.H. Act, 1875	Cleanse and limewash Workshops	17	13
P.H. Act, 1875, S. 49	Removal of manure	..	
Manchester New Streets Act, 1853	To close cellar dwellings	1	
Not issued under any Act of Parliament ..	Preliminary notice for general repairs, internal and external	3,487	3,415
Factory and Workshops Act, 1901, S. 15, and Bye-laws made thereunder	Provide adequate means of escape in case of fire	37	28
Factory and Workshops Act, 1901, S. 14 (2)..	Provide adequate means of escape in case of fire (Factory erected before 1892. Workshop before 1896.)	1	3
Bye-laws	Removal of horse manure and provision of manure-steads	3	3
	Houses let in lodgings	105	108
	Tents, vans, etc.	118	132
	TOTALS	9,703	9,534

In addition to the above, 1,178 circular-letters were sent to owners *re* defective water-closets, and 1,068 orders on the Cleansing Department for new ashbins were issued to owners or contractors; also 9 notices were issued for repairs to canal boats, 8 of which were complied with.

• In these figures are included a number of notices outstanding from the previous year.

WARDS	Fish Curers	Bone Boilers	Blood Boilers	Poultry Food Manufacturers	Chemical Manufacturers	Fish Fryers	Gut Cleaners & Sausage Skin Preparers	Horse Slaughterers	Rubber Spreaders	Oilcloth, etc., Manufacturers	Oil Gas Manufacturers	Size Manufacturers	Pickle Manufacturers	Rag and Bone Dealers	Soap Boilers	Tanners and Leather Dressers	Tallow Melters, Oil Refiners, etc.	Tripe Boilers	Totals
All Saints	..	..	..	..	..	22	..	..	1	..	..	..	..	1	..	..	..	..	24
Ardwick	..	..	..	..	..	37	..	..	1	..	1	1	..	1	..	..	..	..	41
Beswick	..	..	..	..	1	31	..	..	..	..	..	..	1	1	..	..	..	..	34
Blackley	..	..	..	..	..	14	1	..	..	..	..	..	1	2	..	..	..	..	18
Bradford	..	1	..	..	11	29	1	1	6	..	..	2	..	3	1	..	..	3	58
Cheetham	..	..	..	..	..	15	..	..	..	1	..	..	..	3	..	..	..	..	19
Chorlton-cum-Hardy ..	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	15
Collegiate Church	1	1	..	..	1	7	..	..	..	..	..	..	..	..	..	3	..	..	13
Collyhurst	..	..	..	..	..	31	..	..	..	..	..	..	..	..	..	..	..	..	31
Crumpsall	..	..	..	..	1	7	..	..	..	..	..	..	..	..	..	1	..	..	9
Didsbury	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	7
Exchange	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	..	..	..	3
Gorton North	..	..	..	..	..	18	..	..	..	..	..	..	..	1	..	..	..	..	19
Gorton South	..	..	..	..	..	31	..	..	1	..	..	..	..	..	..	..	..	..	32
Harpurhey	..	..	..	..	..	20	..	..	..	..	..	..	..	..	..	..	1	..	21
Levenshulme	..	..	..	..	..	14	..	..	..	..	..	..	..	..	..	..	..	1	15
Longsight	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	16
Medlock Street	..	..	..	..	..	46	..	..	..	..	..	1	1	1	..	..	..	..	49
Miles Platting	..	..	..	..	3	27	..	1	1	1	..	..	..	3	1	1	..	..	38
Moston	..	..	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	15
Moss Side East	..	..	..	..	..	17	..	..	..	..	..	..	..	..	..	..	..	..	17
Moss Side West	..	..	..	..	..	19	..	..	..	..	..	..	..	..	..	..	..	..	19
New Cross	..	..	..	..	..	42	..	..	2	..	..	..	1	..	..	..	3	1	49
Newton Heath	..	..	..	..	..	20	1	..	1	..	..	..	..	..	1	..	..	..	23
Openshaw	..	..	..	..	2	38	..	..	..	..	..	..	1	1	..	..	..	..	42
Oxford	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
Rusholme	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	..	..	11
St. Ann's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's	..	..	..	..	..	11	..	..	..	..	..	..	..	..	..	..	..	..	11
St. George's	..	1	..	1	..	44	..	..	..	..	..	..	..	2	1	..	1	..	50
St. John's	..	..	1	..	..	4	..	..	1	..	..	..	..	3	..	..	..	..	9
St. Luke's	..	..	..	..	..	33	..	..	..	..	..	..	1	1	1	..	..	..	36
St. Mark's	..	..	..	..	..	35	..	..	..	..	..	..	..	1	..	..	..	..	36
St. Michael's	..	..	..	..	1	20	..	..	1	1	..	..	1	2	..	..	1	1	28
Withington	..	..	..	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	16
Totals	1	3	1	1	20	715	3	2	15	3	1	4	7	28	5	5	6	6	826

TABLE No: 6.—SHOWING THE WORK DONE BY THE INSPECTORS UNDER THE FACTORY AND WORKSHOPS AND SHOPS ACTS DURING 1929.

MUNICIPAL WARD	SHOPS				FACTORIES AND WORKSHOPS								BAKEHOUSES						OUTWORKERS	
	Number visited	Number of infringements reported to Committee	Number of cases in which Magisterial proceedings were taken	Number on Register	Number visited	Number in which sanitary arrangements were found defective	Not provided with proper means of escape in case of fire	Means of escape in case of fire not being maintained in accordance with requirements of the Act	Reports referred to H.M. Inspector of Factories	Number of infringements reported to Committee	Number of cases in which Magisterial proceedings were taken	Number on Register	Number visited	Number in which sanitary arrangements were found defective	Reports referred to H.M. Inspector of Factories	Number of infringements reported to Committee	Number of cases in which Magisterial proceedings were taken	Number on Register	Visits to houses where Outworkers are employed	Number of houses found dirty
All Saints	309	..	..	776	37	..	..	..	..	..	..	330	40	..	..	..	..	26	..	..
Ardwick..	411	..	..	793	146	6	3	3	10	..	..	250	18	..	..	..	..	21	..	..
Beswick	165	..	..	713	30	2	1	..	..	..	..	81	35	2	..	2	..	22	..	..
Blackley	383	..	..	358	23	..	..	..	..	..	..	56	35	..	1	..	..	18	..	..
Bradford	218	..	..	523	1	..	..	..	..	..	..	133	8	..	..	..	..	16	..	..
Cheetham	146	..	..	535	58	2	..	2	2	..	..	143	14	..	..	..	..	23	..	..
Chorlton-cum-Hardy ..	225	..	..	422	27	..	..	..	4	..	..	74	47	..	..	..	..	28	..	..
Collegiate Church ..	30	..	..	812	324	2	2	4	15	..	..	697	16	..	..	..	..	21	..	..
Collyhurst	623	..	..	797	80	..	..	..	..	..	..	88	39	..	..	..	..	16	..	..
Crumpsall	131	6	..	177	20	..	..	..	..	..	..	76	25	2	..	..	..	10	..	..
Didsbury	227	..	..	286	196	2	..	..	2	..	..	80	144	..	..	..	..	18	..	..
Exchange	4	..	..	615	396	2	11	12	2	2	..	403	..	..	..	..	..	1	..	..
Gorton North	212	..	..	379	30	..	..	..	2	..	..	44	48	..	..	..	..	20	..	..
Gorton South	417	..	..	569	47	..	..	..	..	..	..	76	66	..	..	..	..	24	..	..
Harpurhey	305	..	..	589	47	..	..	..	..	..	..	78	51	..	..	..	..	26	..	..
Levenshulme	353	..	..	411	95	1	2	..	1	..	..	77	69	..	..	..	..	26	..	..
Longsight	260	4	..	376	64	..	..	..	..	..	..	85	67	2	..	..	..	19	..	..
Medlock Street	225	..	..	1,124	29	..	..	..	..	..	..	181	18	..	..	..	..	24	..	..
Miles Platting	704	..	..	622	113	..	..	..	..	..	..	158	30	..	..	..	..	25	..	..
Moston	435	..	..	340	19	..	..	..	..	..	..	34	9	..	..	..	..	18	..	..
Moss Side East	337	..	..	385	125	..	..	..	..	..	..	84	66	..	..	..	..	13	..	..
Moss Side West	706	..	..	591	49	..	..	..	..	..	..	92	65	..	..	..	..	29	..	..
New Cross	790	1	1	923	46	3	..	7	2	2	..	400	17	..	..	..	..	20	..	..
Newton Heath	328	..	..	477	43	..	..	..	3	..	..	100	16	..	1	..	..	21	..	..
Openshaw	81	..	..	742	2	..	..	..	..	..	..	145	18	..	..	..	..	25	..	..
Oxford	163	..	..	323	300	3	5	1	14	..	..	534	19	..	..	..	..	6	..	..
Rusholme	419	..	..	386	73	..	1	..	3	..	..	85	64	..	..	..	..	18	..	..
St. Ann's	124	..	..	483	323	..	8	..	10	..	..	239	8	..	..	..	..	5	..	..
St. Clements'	106	..	..	597	93	5	..	..	5	..	..	413	12	..	..	..	..	10	..	..
St. George's	86	..	..	1,099	53	..	..	..	..	..	..	244	33	..	..	..	..	34	..	..
St. John's	129	..	..	365	366	1	8	2	44	1	..	320	4	..	..	..	..	3	..	..
St. Luke's	158	..	..	657	50	..	..	..	1	..	..	295	26	..	..	..	..	28	..	..
St. Mark's	207	..	..	701	32	1	..	..	1	1	..	126	36	..	..	..	..	20	..	..
St. Michael's	145	..	..	594	169	3	4	1	5	..	..	247	17	..	..	..	..	8	..	..
Withington	340	..	..	375	57	..	..	..	1	..	..	59	47	..	..	..	..	19	..	..
Mrs. Rosa G. Clift ..	858	..	..	..	442	3	..	..	..	..	..	..	..	..	..	..	..	..	5,275	..
TOTALS	10,760	11	1	19,920	4,005	36	45	32	127	6		6,527	1,227	[illegible]	2	2		661	5,275	[illegible]

Offence	COMMITTEE PROCEEDINGS						MAGISTERIAL PROCEEDINGS.							
	Cases Reported	Ordered to be Summoned	Closing Orders Made	Cautioned	Referred to other Committees	Excused	Number Summoned	Number Fined	Ordered to Pay Costs only	Magistrates' Orders Granted	Withdrawn	Dismissed	Amount of Fines £ s. d.	Amount of Costs £ s. d.
Neglecting to provide effective downspouts after notice	103	4	. .	99	. .	. .	4	. .	4	. .	. .	. .	. .	1 0 0
Neglecting to abate overcrowding after notice ..	2	. .	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Neglecting to repair or provide privies, water-closets, etc., after notice	61	2	. .	59	. .	. .	2	. .	2	. .	. .	. .	. .	15 0
Neglecting to comply with bye-laws *re* tents, vans, etc.	53	10	. .	43	. .	. .	10	4	5	. .	1	. .	1 10 0	1 5 0
Neglecting to remove accumulations of offensive matter, etc., after notice	13	1	. .	12	. .	. .	1	. .	. .	1	. .	. .	. .	8 0
Neglecting to comply with bye-laws *re* manure ..	2	. .	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Neglecting to remove and discontinue keeping animals after notice	1	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Neglecting to discontinue inhabiting cellar dwelling after notice	2	. .	. .	2	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Neglecting to provide proper subsoil drains after notice	1	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Neglecting to remove accumulation of manure, etc., after notice	1	. .	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
Occupying house after Closing Order has been made	1	1	. .	. .	. .	. .	1	*1	. .	. .	. .	. .	. .	. .
Totals	240	18	. .	222	. .	. .	18	5	11	1	1	. .	1 10 0	3 8 0

* Conditional Fine 10s., not imposed as premises vacated.

TABLE No. 7.

Showing the Orders made by the Local Authority under the Shops Act, 1912, for Exemption from Compulsory Closing, and for "Fixing the Day" for the Weekly Half-Holiday, and for "Fixing the Closing Hour" for the several days of the week.

Trade or Business	Date when Order of Exemption was made
Antique and Fine Art Dealers	2nd April, 1913
Artificial Flower Dealers	2nd April, 1913
Bassinette, etc., Dealers	2nd July, 1913
Booksellers and Stationers	8th January, 1913
Brush and Basket Dealers	5th March, 1913
Bazaars	2nd July, 1913
Chemists	2nd July, 1913
Drapers	2nd April, 1913
Dress, Costume, and Mantle Dealers..	5th February, 1913
Furniture, etc., Dealers	2nd July, 1913
Foreign Stamp Dealers	2nd April, 1913
Furriers	5th, March, 1913
Grocers and Provision Dealers	7th August, 1912
Glass and China Dealers	2nd April, 1913
Hardware Dealers	5th February, 1913
Hatters	2nd April, 1913
Hosiers and Outfitters	8th January, 1913
Jewellers	8th January, 1913
Knitting Machine Dealers	5th March, 1913
Machinery (Typewriters, &c.) Dealers	1st April, 1914
Music and Musical Instrument Dealers	30th August, 1912
Milliners	2nd July, 1913
Naturalists	2nd July, 1913
Opticians and Instrument Dealers	5th February, 1913
Photographers	2nd July, 1913
Portmanteau, Trunk, Bag, and Fancy Leather Dealers..	7th August, 1912
Rubber Goods and Waterproof Dealers	5th March, 1913
Second-hand Booksellers	7th August, 1912
Theatrical Costumiers	30th August, 1912
Toy and Fancy Goods Dealers	8th January, 1913
Tailors	2nd April, 1913
Umbrella Dealers	2nd April, 1913
Wig Makers, Hair Workers, and Hairdressers' Sundries Dealers	2nd April, 1913

TABLE NO. 7—continued.

Showing the Orders made by the Local Authority under the Shops Act, 1912, for "Fixing the Day" for the Weekly Half-Holiday, and for "Fixing the Closing Hour" for the several days of the week.

Trade or Business	Date when Order was made "Fixing the Day" for the Weekly Half-Holiday	Day Fixed
*Corn and Provender Dealers	8th January, 1913	Saturday or (at the option of the shopkeeper) Wednesday
Cloggers	8th January, 1913	Wednesday or (at the option of the shopkeeper) Saturday
Hairdressers and Barbers ..	7th January, 1914	
Pawnbrokers	5th August, 1914	
Boot and Shoe Dealers.. ..	3rd February, 1915	
Sale of Meat	14th July, 1920	

* An Exemption Order has been made in this trade fixing the closing hour on Saturday at 2 o'clock.

Trade or Business	Date when Order was made "Fixing the Closing Hour" for the several days of the week	Closing Hour					
		Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
Hairdressers and Barbers (except Central Area)	6th March, 1907	p.m. 9–0	p.m. ..	p.m. 1–0	p.m. 9–0	p.m. 9–30	p.m. 11–30
Boot and Shoe Dealers	28th April, 1915	8–0	8–0	1–0	8–0	9–0	10–30
Sale of Meat	25th October, 1920	7–0	7–0	1–0	7–0	8–0	7–0

TABLE No. 8.—SHOWING THE INFRINGEMENTS OF THE SHOPS, ETC., ACTS REPORTED TO THE COMMITTEE, THE ACTION TAKEN, AND THE DISPOSAL WHERE LEGAL PROCEEDINGS WERE INSTITUTED.

OFFENCE	COMMITTEE PROCEEDINGS					MAGISTERIAL PROCEEDINGS							
	Cases Reported	Ordered to be Summoned	Cautioned	Referred to other Committees	Excused	Number Summoned	Number Fined	Ordered to pay Costs only	Magistrates' Orders Granted	Withdrawn	Dismissed	Amount of Fines £ s. d.	Amount of Costs £ s. d.
Did exhibit the prescribed form incorrectly stating the assistants' weekly half-holiday	9	1	8	..	..	1	1	..	..	..	..	1 0 0	..
Neglecting to comply with notice served to remedy defects in workshops	3	..	3	..	..	..	..	..	..	..	..	..	..
Did not exhibit the abstract as to young persons	2	..	2	..	..	..	..	..	..	..	..	..	..
Shop open in contravention of the "Closing Orders"	..	..	..	..	..	..	..	..	..	..	..	..	..
Did not maintain means of escape in case of fire in a satisfactory condition	3	..	3	..	..	..	..	..	..	..	..	..	..
Bakehouse in a dirty condition	2	..	2	..	..	..	..	..	..	..	..	..	..
Neglecting to send to Local Authority list of outworkers	1	..	1	..	..	..	..	..	..	..	..	..	..

TABLE No. 9.

SHOWING THE NUMBER AND CLASSIFICATION OF PERSONS EMPLOYED AS OUTWORKERS BY FIRMS WITHIN THE CITY, AND THE NUMBER OF SUCH FIRMS.

TRADES	No. of Employers	No of Outworkers or Contractors employed
Makers of Wearing Apparel	297	1,076
Button Carding	1	4
Cabinet Makers and Upholsterers	3	9
Artificial Flower Makers	1	1
Chamois Mops	4	25
Furriers	1	2
Fent Sorters	2	6
Handkerchief Hemmers	3	7
Quilt, Cushion, etc., Makers	12	150
Umbrella Trimmers	18	145
Window Blinds	1	2
Shopping Bag Makers	2	46
Sponge Cloths, Dusters, etc.	2	7
Hygienic Cleaning	1	2
Totals	348	*1,482

*1,318 of these are in the City, the remainder are in the districts of other Local Authorities, to whom lists showing the names and addresses have been sent.

TABLE No. 10.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR THE YEAR 1929, FOR THE COUNTY BOROUGH OF MANCHESTER, ON THE ADMINISTRATION OF THE FACTORY AND WORKSHOP ACT, 1901, IN CONNECTION WITH FACTORIES, WORKSHOPS, WORKPLACES, AND HOMEWORK.

1.—INSPECTION OF FACTORIES, WORKSHOPS, AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises	Number of		
	Inspections	Written Notices	Prose-cutions
Factories (including Factory Laundries) .. Workshops (including Workshop Laundries) .. Workplaces (other than Outworkers' premises included in Part 3 of this Report)	5,232	86	..

TABLE No. 10—*continued*

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS, AND WORKPLACES.

Particulars	Number of Defects			No. of Prosecutions
	Found	Remedied	Referred to H.M. Inspector	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness	41	41	..	..
Want of ventilation	3	2	..	..
Overcrowding	..	..	..	..
Want of drainage of floors	1	1	..	..
Other nuisances	18	17	..	..
Sanitary accommodation—				
Insufficient	22	13	..	..
Unsuitable or defective	11	9	2	..
Not separate for sexes	1	..	..	..
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (S. 101)	..	..	..	..
Other offences (excluding offences relating to outwork and offences under the sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers Order, 1921).	90	73	7	..
Total	187	156	9	..

* Including those specified in sections 2, 3, 7, and 8 of the Factory and Workshop Act as remediable under the Public Health Acts.

Structural requirements of the Factory and Workshops Acts :—

1. Means of escape from fire :—

Bye-laws have been in operation since 1908. These have been amended, and in their amended form were approved by the Local Government Board in 1913.

A large amount of work has been done under these bye-laws, and practically the whole of the factories and workshops have been dealt with.

2. Sanitary accommodation :—

Although the work has not been carried out under the Sanitary Accommodation Order, 1903, the conditions stated in the Memorandum have been enforced, and all the factories and workshops have been dealt with, although changes are constantly occurring.

e No. 11.—Showing the Number of Houses Let in Lodgings in the City, the umber of Visits to such Houses, and the Number of Cases Reported or Offences against the Bye-laws during 1929.

Municipal Ward	Number of Houses let in Lodgings on the Register	Number of Visits		Number of Offences reported to the Committee	Number ordered to be summoned	Number cautioned, excused, or reported to other Committees
		Day	Night			
nts	271	164	3	1	..	1
k	91	160	..	1	1	..
k	10	18	..	..	..	..
v	8	20	..	..	..	..
rd	25	26	1	..	..	..
am	47	54	1	..	..	..
n-cum-Hardy	3	16	2	2	2	..
ate Church	419	529	15	..	..	..
irst	14	22	..	..	..	..
sall	8	14	..	..	..	..
ry	5	10	..	..	..	..
ge	1	6	..	..	..	..
North	8	2	..	..	..	..
South	4	..	..	..	..	..
rhey	27	61	..	..	..	..
hulme	10	12	..	..	..	..
ght	18	40	..	..	..	..
k Street	125	65	5	..	..	..
latting	25	20	..	..	..	..
.. ..	1	1	..	..	..	..
lde East	95	97	..	..	..	..
lde West	29	5	..	..	..	..
ross	141	212	..	..	..	..
n Heath	3	6	..	..	..	..
aw	16	7	..	..	..	..
l	6	13	..	..	..	..
lme	18	18	..	..	..	..
n's	..	..	..	..	..	..
ment's	19	9	..	..	..	..
orge's	104	69	1	..	..	..
hn's	103	106	..	..	..	..
ke's	305	151	6	..	..	..
rk's	10	3	..	..	..	..
chael's	131	244	..	1	..	1
gton..	4	3	..	..	..	..
Totals	2,104	2,183	34	5	3	2

e showing the Number of Cases in which Magisterial Proceedings were Taken and the Result of Same.

Offence	Number of Summonses taken out	Number in which Fines were imposed	Number in which Costs only were ordered to be Paid	Number excused, dismissed, or withdrawn	Amount of Fines imposed	Amount of Costs ordered to be Paid
					£ s. d.	£ s. d.
Lodging House	1	1	..	..	0 10 0	0 10 0
ng-house overcrowded	2	2	..	..	1 0 0	..
Totals	3	3	..	..	1 10 0	0 10 0

TABLE NO. 12.

SUMMARISED REPORT OF WORK DONE BY DISTRICT SANITARY INSPECTORS, YEAR ENDING 31ST DECEMBER, 1929.

COMPLAINTS RECEIVED FROM

Medical Officer of Health	2,757	Police	4
Sanitary Inspectors	729	Public	6,2
Cleansing Department	434	Others	6
Surveyor's Department	45	Anonymous	
H.M. Inspector of Factories	83	TOTAL	10,4

INSPECTIONS	1st Inspections	Re-Inspections	INSPECTIONS	1st Inspections	Re-inspect
Dwelling Houses under Housing Acts	10,211	10,197	Slaughter Houses	—	
Dwelling Houses	15,635	36,944	Tips for Refuse	—	5
Business Premises	855	2,583	*Parks, etc.	2	6
Offensive Trades	11	2,571	New Buildings	854	1,3
Schools..	37	41	Miscellaneous	2,163	1.3
Stables	4	7,301	TOTAL	29.836	65,7
Cellars	13	19			
Houses let in lodgings	51	Day 2,132 Night 34			

* In addition, the Female Factories Inspector 82 inspections of sanitary accommodation for f in parks.

INVESTIGATIONS *re* INFECTIOUS DISEASES.

Smallpox	7	Erysipelas	423	Contacts—	
Scarlet Fever	2,332	Chicken Pox	3,448	Smallpox..	1,7
Phthisis	11	Malaria	21	Scarlet Fever.. ..	1
Diphtheria	849	Encephalitis Lethargica.	45	Other	
Enteric Fever	48	Others	55		
		TOTAL	7,239	TOTAL.. ..	1,9

Number of Patients removed to Hospital ..	2,687	Inspections of Infected Houses..	7,0
Number of Rooms Disinfected by Corporation.	4,303	Re-inspections of Infected Houses	21.0
Number of Rooms Disinfected by Tenants ..	6,790		

Number of Drains Tested by Water	2.8
Number of other Visits (not inspections)	10,
Number of Premises entered for Examination of Drains, Water Closets, etc.	4

	Number registered during the year	Number removed or discontinued during the year	Total number Register at of year
Shops	413	333	19,920
Workshops	108	175	2,916
Bakehouses	17	16	661
Factories	82	137	3,611
Houses let in lodgings	59	64	2,104
Offensive Trades	13	28	826
Stables	6	31	1,214

TABLE NO. 12.—*continued.*

PARLIAMENT, &C.	WORK REQUIRED TO BE DONE	Number of Notices, &c., Outstanding. Previous year, ending 31st, Dec., 1923		Total Number of Notices, &c., complied with. Outstanding from previous year, ending 31st Dec., 1928		Total Number of Notices served since 31st Dec., 1928		Total Number of Notices complied with since 31st Dec., 1928, including Outstanding Notices	
		Notices	Premi's	Notices	Premi's	Notices	Premi's	Notices	Premi's
, S. 41, and P.H.A. nt Act, 1890, S. 19	Reconstruction of drains..	85	235	69	162	335	604	314	582
, S. 23	Provide sufficient drains ..	11	25	9	23	3	3	9	23
Improvement Act, 6	Open, cleanse, &c., drains	149	204	147	202	1,116	1,269	1,088	1,230
, S. 36	Provide ashbins, repair water closets, &c.	49	58	49	58	469	559	462	544
5, S. 91	To abate nuisances	68	69	50	51	185	204	193	201
Corporation Water- l Improvement Act, 9	Renew defective down-spouts and gutters	264	435	260	4[illegible]8	1,065	1,490	1,007	1,383
New Streets Act, 1	Flagging of yards and passages	177	500	177	500	355	1,144	401	1,103
New Streets Act, 41, and Manchester on Act, 1891, S. 38	Repairs to surfaces of yards and passages	424	1,217	420	1188	1,278	2,863	1,327	3,058
endment Act, 1907,	Provide sinks and drains, &c.	1	16	1	16	5	5	5	20
Corporation Water- and Improvement 7-1869	Repairs to privies, &c. ..	125	188	125	188	500	643	489	619
ct, 1925.	General repairs to houses, internal and external	115	311	107	291	532	893	443	783
Corporation Water- d Improvement Act, 31	Discontinue keeping swine	..	..	..	..	..	..	..	..
Police Act, 1844,	Cleanse and limewash houses	10	10	10	10	60	60	58	58
875, S. 91 to 94, and Workshops Acts, 1901	To remedy defects in workshops	4	4	4	4	31	31	30	30
nd Workshops Act, 2, and P.H.A., 1875	Cleanse and limewash workshops	1	1	1	1	17	17	18	18
75, S 49	Removal of manure	..	..	..	..	..	..	..	..
r New Streets Act,	To close cellar dwellings..	..	..	..	..	1	1	1	1
d under any Act of ent	Preliminary notice for general repairs, internal and external	950	1,934	945	1,917	3,487	6,066	3,415	5,740
and Workshops Act, . 15, and Bye-laws hereunder	Provide adequate means of escape in case of fire	14	15	14	15	37	37	28	29
and Workshops Act, . 14 (2)	Ditto	3	3	3	3	1	1	3	3
ry erected before 1892.	workshop before 1896.)								
.. ..	Removal of horse manure and provision of manure steads	..	..	..	..	3	3	3	3
	Houses let in lodgings ..	11	11	10	10	105	110	108	11
	Tents, vans, &c.	24	20	21	18	118	114	132	12
	TOTALS ..	2,485	5,256	2,422	5,065	9,703	16,117	9,534	1566

TABLE NO. 12.—*continued.*

REPORTS TO OTHER COMMITTEES	Reports	Premises
Cleansing—		
Ashbins require renewal	927	935
Ashpits require emptying	11	13
Receptacles require emptying ..	18	18
Ashplaces left dirty after emptying.	3	2
Streets, courts, and passages require cleansing	49	..
Soughs stopped in streets, courts, and passages	1,072	..
Waterworks (burst pipes, &c.)	1.313	1,492
Highways (settling, &c., in streets, paving of streets and passages, projections, &c.)	550	..
Gas (escape of gas, &c.)	107	100
Markets	2	3
Watch	3	3
Rivers	..	..
Drainage	34	125
Miscellaneous Reports	75	53
TOTAL	4.164	

REPORTS SENT TO	Reports	Pr
Medical Officer of Health	4,392	3
City Architect	718	1
City Engineer	86	
City Surveyor	359	1
TOTAL	5.555	

INFRINGEMENTS OF BYE-LAWS AND LOCAL AN

P.H. ACTS REPORTED TO COMMITTEE.

Stable Bye-laws	
Houses let in lodging Bye-laws	
Tents, Vans, &c., Bye-laws	
Police Act, 1844	
Public Health Acts	
Manchester Corporation Waterworks, &c., Acts.	
Housing Acts	
TOTAL	2

Notices referred to Drainage Sub-Committee in default of compliance by owner	8
Number of letters sent asking for work to be done	3.2
Number of letters complied with	2.0
Number of circulars sent asking for defects to water-closets to be remedied	1,1

FACTORY AND WORKSHOPS AND SHOPS ACTS.

SHOPS		FACTORIES AND WORKSHOPS						BAKEHOUSES			
Number visited	Number of infringements reported to Committee	Number visited	Number in which the sanitary arrangements were found defective	Not provided with proper means of escape in case of fire	Means of escape in case of fire not being maintained in accordance with the requirements of the Act	Reports referred to H.M. Inspector of Factories	Number of infringements reported to Committee	Number visited	Number in which the sanitary arrangements were found defective	Reports referred to H.M. Inspector of Factories	Infringements reported
9,902	11	3,563	33	45	32	127	6	1,227	6	2	

In addition to the above, 6,475 visits (Shops, 858, Factories and Workshops, 442; Outworkers, 5,275) were mad by the Female Factory and Workshops Inspector.

TABLE No. 13.—SHOWING THE PROCEEDINGS TAKEN UNDER THE DIRECTION OF THE COMMITTEE FOR THE ABATEMENT OF NUISANCES FROM BLACK SMOKE.

INSPECTOR	Number of Observations Made	Number of Mills, etc., Visited	Number of Notices Served	Number Cautioned by Inspector under Two Minutes' Black Smoke
M. C. WAITE	972	145	33	36
A. E. CROSSLEY	391	193	25	30
S. M. SMITH	352	172	23	67
A. BRADSHAW	151	189	21	52
TOTALS	1,966	699	102	185

Offences reported to Committee.

OFFENCE	Number of Cases Reported	Number ordered to be Summoned	Number Cautioned	Number Excused
Allowing black smoke to be emitted from chimneys of works after notice	12	12	..	..
Neglecting to comply with Magistrates' Order to abate nuisance from offensive smoke	89	62	27	..
Burning rags within 100 yards of a dwelling-house	1	1	..	..
TOTALS	102	75	27	..

Magisterial Proceedings.

OFFENCE	Number Summoned	Number Fined	Ordered to pay Costs only	Magistrates' Orders Issued	Number Withdrawn	Number Dismissed	Amount of Fines £ s. d.	Amount of Costs £ s. d.
Allowing black smoke to be emitted from chimneys of works	12	..	..	12	..	..	..	4 16 0
Neglecting to comply with Magistrate's Order to abate nuisance from offensive smoke	62	59	2	..	1	..	122 0 0	0 10 0
Burning rags within 100 yards of a dwelling-house	1	1	..	..	..	..	0 10 0	..
TOTALS	75	60	2	12	1	..	122 10 0	5 6 0

TABLE No. 14.—SHOWING THE PROCEEDINGS TAKEN UNDER THE PROVISIONS OF THE ADULTERATION OF FOOD AND DRUGS AND THE MARGARINE ACTS DURING 1929.

ARTICLE	Number of Samples obtained	Number Adulterated	Number not Adulterated	Number ordered to be Summoned	Number Cautioned by Committee	No action taken. Slightly Adulterated or Informal Sample	MAGISTERIAL PROCEEDINGS					
							Number Summoned before Magistrates	Number Fined	Number ordered to pay Costs only	Number Dismissed or Withdrawn	Amount of Fines Imposed	Amount of Costs ordered
											£ s. d.	£ s.
owroot and Corn Flour ..	18	..	18	..	..	..	..	..	..	..	..	..
on and Ham	42	..	42	..	..	..	..	..	..	..	..	..
ing Powder	18	..	18	..	..	..	..	..	..	..	..	..
r	45	..	45	..	..	..	..	..	..	..	..	..
f Dripping	16	..	16	..	..	..	..	..	..	..	..	..
nd	31	..	31	..	..	..	..	..	..	..	..	..
ter	82	1	81	..	..	1	..	..	..	..	..	..
nphorated Oil	20	..	20	..	..	..	..	..	..	..	..	..
or Oil	20	..	20	..	..	..	..	..	..	..	..	..
ese	20	..	20	..	..	..	..	..	..	..	..	..
er	14	..	14	..	..	..	..	..	..	..	..	..
oa	25	..	25	..	..	..	..	..	..	..	..	..
Liver Oil	17	..	17	..	..	..	..	..	..	..	..	..
ee and Coffee Essence ..	54	1	53	1	..	..	1	1	..	..	0 10 0	0 10
fectionery and Mincemeat	190	..	190	..	..	..	..	..	..	..	..	..
m	53	1	52	1	..	..	1	1	..	..	2 0 0	0 10
gs	359	1	358	1	..	..	1	1	..	..	0 10 0	0 10
r	71	..	71	..	..	..	..	..	..	..	..	..
(Tinned and Potted) ..	21	..	21	..	..	..	..	..	..	..	..	..
it (Tinned)	21	..	21	..	..	..	..	..	..	..	..	..
ey	7	..	7	..	..	..	..	..	..	..	..	..
Cream	1	..	1	..	..	..	..	..	..	..	..	..
s	41	..	41	..	..	..	..	..	..	..	..	..
ies	7	..	7	..	..	..	..	..	..	..	..	..
chup and Sauces	11	..	11	..	..	..	..	..	..	..	..	..
d	45	..	45	..	..	..	..	..	..	..	..	..
garine	44	..	44	..	..	..	..	..	..	..	..	..
t (Tinned and Prepared) ..	78	..	78	..	..	..	..	..	..	..	..	..
t Extract	1	..	1	..	..	..	..	..	..	..	..	..
k	1351	*119	1232	22	8	*89	22	20	1	1	37 5 0	28 1
k (Condensed & Evaporated)	19	..	19	..	..	..	..	..	..	..	..	..
eral Waters, Cordials, etc...	48	..	48	..	..	..	..	..	..	..	..	..
tard	12	..	12	..	..	..	..	..	..	..	..	..
meal	22	..	22	..	..	..	..	..	..	..	..	..
ve Oil	19	..	19	..	..	..	..	..	..	..	..	..
ley	26	..	26	..	..	..	..	..	..	..	..	..
per	25	..	25	..	..	..	..	..	..	..	..	..
kles	11	..	11	..	..	..	..	..	..	..	..	..
e, Tapioca, etc.	72	..	72	..	..	..	..	..	..	..	..	..
t	2	..	2	..	..	..	..	..	..	..	..	..
ts Foot Oil	1	..	1	..	..	..	..	..	..	..	..	..
ces	13	1	12	1	..	..	1	1	..	..	0 10 0	0 10
ar	38	..	38	..	..	..	..	..	..	..	..	..
.. ..	48	..	48	..	..	..	..	..	..	..	..	..
acle and Golden Syrup ..	13	..	13	..	..	..	..	..	..	..	..	..
pe	12	..	12	..	..	..	..	..	..	..	..	..
etables (Tinned) Prepared ..	6	..	6	..	..	..	..	..	..	..	..	..
egar	28	† 8	20	3	1	† 4	3	3	..	..	4 0 0	1 11
nes	49	..	49	..	..	..	..	..	..	..	..	..
iskey	46	1	45	..	1	..	..	..	..	..	..	..
m	38	1	37	..	1	..	..	..	..	..	..	..
ndy	22	..	22	..	..	..	..	..	..	..	..	..
.. ..	24	..	24	..	..	..	..	..	..	..	..	..
s (Dried)	..	..	..	..	..	..	..	..	..	..	..	..
lt (Dried)	61	..	61	..	..	..	..	..	..	..	..	..
w Fruit	8	..	8	..	..	..	..	..	..	..	..	..
Liver Oil and Malt Extract	1	..	1	..	..	..	..	..	..	..	..	..
tilled Water	4	1	3	1	..	..	1	1	..	..	0 10 0	0 10
affin Oil	8	..	8	..	..	..	..	..	..	..	..	..
TOTALS	3399	135	3264	30	11	94	30	28	1	1	45 5 0	32 5

In addition to the above, 850 samples of milk have been procured from farmers' cans, for bacteriological examinati

* Includes one sample submitted by County authority: Certificate issued.

† Includes one sample submitted by private purchaser: Certificate issued.

HOUSING PARTICULARS FOR THE CITY OF MANCHESTER.

The figures are summarised below.

The number of houses certified and dealt with from February, 1885, to December 31st, 1929, is as follows :—

	Number Certified and ordered to be Closed *	Number of Houses added together or to other Houses	Number Demolished	Number Repaired and Reopened	Number Closed	Number not Closed	Number which stand Adjourned
Totals	27,467	3,391	7,065	13,712	1,234	1,975	90

* This work is carried out under a Local Act.

Owing to the prevailing conditions with regard to housing shortage, only four houses have been certified as unfit for human habitation during the year 1929, three of which have been demolished and one closed.

Table No. 15.

Housing Conditions—Year ending 31st December, 1929.

General Statistics.

Number of new houses completed during the year :—	
(*a*) Total, including numbers given separately under (*b*) ..	3,208
(*b*) With State assistance under the Housing Acts—	
(i.) By the Local Authority	1,980
(ii.) By other bodies or persons	1,228

1. *Unfit Dwelling-houses.*

Inspection—(1) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	*22,715 †58,016
(2) Number of dwelling-houses which were inspected and recorded under the Housing Consolidated Regulations, 1925	10,142
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	1,168
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	4,868

2. *Remedy of Defects without Service of Formal Notices.*

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their Officers	5,740

* First Inspection. † Re-inspection

TABLE NO. 15—*continued*

General Statistics—continued

3. *Action under Statutory Powers.*

(A) *Proceedings under Section* 3 *of the Housing Act,* 1925.

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	893
(2) Number of dwelling-houses which were rendered fit after service of formal notices—	
(*a*) By owners	708
(*b*) By Local Authority in default of owners	75
(3) Number of dwelling-houses in respect of which closing orders became operative in pursuance of declarations by owners of intention to close	None

(B) *Proceedings under the Public Health Acts.*

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	1,168
(2) Number of dwelling-houses in which defects were remedied after service of formal notices—	
(*a*) By owners	911
(*b*) By Local Authority in default or at request of owners	254

(C) *Proceedings under Sections* 11, 14, *and* 15 *of the Housing Act,* 1925.

(1) Number of representations made with a view to the making of closing orders	None
(2) Number of dwelling-houses in respect of which closing orders were made	None
(3) Number of dwelling-houses in respect of which closing orders were determined, the dwelling-houses having been rendered fit	None
(4) Number of dwelling-houses in respect of which demolition orders were made	None
(5) Number of dwelling-houses demolished in pursuance of demolition orders	None

TABLE NO. 16.

SHOWING THE AMOUNTS RECEIVED FOR THE USE OF THE
DURING THE FINANCIAL YEAR

SITUATION OF CONVENIENCE		Cost of Construction			Wages and Clothing			Gas, Water, Repairs, etc.			Amount received for use of Water-closets			Amount received for use of Lavatories		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Albert Square (Males)		948	7	10	448	0	11	138	2	11	244	2	4	53	6	4
Victoria Buildings (Females)		630	6	10	579	0	4	198	12	0	732	8	10	58	10	2
Piccadilly	Females	887	12	9	346	11	8	157	16	5	857	2	5	64	17	4
	Males	1384	14	5	552	6	8	255	14	7	573	10	11	240	5	2
Market Place (Males)		1035	9	5	403	12	8	164	19	4	307	5	9	117	6	8
South Street (Males)		1615	7	6	354	15	8	111	6	1	91	5	1	43	15	0
Great Bridgewater Street (Males)		1711	18	9	439	9	11	136	18	5	192	0	5	86	7	6
Victoria Street (Males)		2196	15	3	447	4	5	235	14	9	243	3	5	92	8	2
New Cross	Females	1615	5	5	257	2	4	114	7	3	182	8	4	13	11	10
	Males	1755	5	1	427	19	6	107	19	8	163	4	7	53	13	4
Stevenson Square	Females	1605	16	11	258	3	0	141	10	8	285	2	2	11	11	6
	Males	1724	16	11	433	4	0	128	11	10	184	4	0	59	14	8
a Blackley (Females)		959	8	9	..			50	17	5	..			..		
Blackley (Males)		1026	12	9	355	8	3	70	17	6	16	9	1	3	4	10
b Corporation Street (Males)		2364	10	9	399	19	1	109	11	1	62	17	1	18	10	8
Withington (Females)		267	14	6	242	5	0	57	17	6	76	7	7	1	2	8
Lloyd's Hotel, Chorlton-cum-Hardy		..			12	14	10	7	13	8	5	13	9	..		
Shudehill (Males)		1631	9	3	390	15	2	175	12	1	102	18	7	25	12	6
Longsight (Males)		260	14	1	66	17	8	19	8	3	39	13	6	..		
Ardwick Green (Females)		605	10	7	243	0	10	83	11	9	85	9	6	17	17	10
c Brooks's Bar	Females	112	16	10	260	0	4	40	16	6	26	1	2	0	1	10
	Males	112	16	10	22	5	11	23	10	6	10	16	10	..		
e Gorton Lane	Females	201	19	10	241	11	9	42	4	4	15	15	3	0	7	2
	Males	201	19	10	89	3	7	14	16	7	18	12	9	..		
c Moston Lane	Females	230	14	6	43	10	4	20	1	11	3	15	11	..		
	Males	230	14	6	43	10	4	13	1	4	..			..		
c Southern Cemetery	Females	405	18	8	39	18	10	17	7	9	39	15	9	..		
	Males	405	18	8	39	18	10	18	0	3	23	4	9	..		
c Barlow Moor Road	Females	270	0	0	..			19	4	10	15	4	8	..		
	Males	270	0	0	..			19	4	9	8	11	4	..		
d Levenshulme (Females)		249	10	4	237	1	9	74	1	1	45	4	2	0	14	4
Levenshulme (Males)		249	10	3	75	19	8	26	10	1	19	16	11	..		
c Gorton Town Hall (Females)		550	0	0	160	11	9	26	11	10	69	18	6	0	19	8
c Gorton Town Hall (Males)		820	0	0	33	8	10	24	13	2	36	13	9	..		
North Road (Females)		521	4	9	35	5	11	13	10	2	6	19	11	..		
Queen's Road	Females	555	0	11	22	5	11	21	6	0	24	4	8	..		
	Males	555	0	11	35	5	11	7	17	6	21	10	1	..		
West Point	Females	644	6	10	32	0	11	10	9	4	16	1	8	..		
	Males	644	6	9	32	0	11	9	0	8	12	14	11	..		
Kitchen Bank		776	7	4	240	1	1	50	5	1	34	13	11	0	11	4
g Dean Lane	Females	1121	0	0	31	1	10	13	12	2	2	16	4	0	0	4
	Males				3	0	0	0	18	1	0	18	3	..		
Sundry Receipts		..			..			..			..			..		
TOTALS		33357	5	6	8376	16	4	2974	7	1	4898	18	8	964	10	10

a This Convenience was let with the shop at a rental of £30 per annum and rates, the Public Health Committee undertaking to pay for gas, water, and electricity.

b Tramways Committee pay 7s. 6d. per week for privileges extended to Tramways employees at this Convenience.

c Tramways Committee pay half cost of construction (except Barlow Moor Road Conveniences, the amount stated being the cost apportioned to the Public Health Committee) and working expenses, and receive half receipts.

UNDERGROUND CONVENIENCES, AND THE WORKING EXPENSES, ETC., ENDED 31ST MARCH, 1930.

Amount received for left Parcels £ s. d.	Amount received from sale of Sanitary Towels £ s. d.	Commission on Receipts from Weighing Machines £ s. d.	Number of occasions Water-closets have been used	Number of Persons who have paid for use of Lavatories	Total Receipts £ s. d.	Total Expenditure £ s. d.	Surplus £ s. d.	Deficit £ s. d.
..	..	8 0 5	58,583	6,398	305 9 1	586 3 10	..	280 14 9
174 6 4	42 3 4	5 13 0	175,786	7,021	1013 1 8	777 12 4	235 9 4	..
71 4 0	32 5 10	6 13 10	205,707	7,784	1022 3 3	504 8 1	517 15 2	..
230 11 10	..	83 10 0	137,651	28,831	1127 17 11	808 1 3	319 16 8	..
..	..	7 3 2	73,749	14,080	431 15 7	568 12 0	..	136 16 5
..	..	4 14 2	21,901	5,250	139 14 3	466 1 9	..	326 7 6
..	..	10 13 6	46,085	10,365	289 1 5	576 8 4	..	287 6 11
105 1 4	..	6 17 7	58,361	11,089	447 10 6	682 19 2	..	235 8 8
10 3 8	7 3 8	0 19 2	43,780	1,631	214 6 8	371 9 7	..	157 2 11
..	..	18 18 3	39,175	6,440	235 16 2	535 19 2	..	300 3 0
21 18 10	13 0 6	1 16 1	68,426	1,389	333 9 1	399 13 8	..	66 4 7
63 13 6	..	6 5 9	44,208	7,168	313 17 11	561 15 10	..	247 17 11
..	..	..	..	..	30 0 0	50 17 5	..	20 17 5
..	..	4 16 5	3,949	389	24 10 4	426 5 9	..	401 15 5
11 6 8	..	5 16 8	15,085	2,224	118 1 1	509 10 2	..	391 9 1
24 2 9	2 19 2	0 13 7	18,331	136	105 5 9	300 2 6	..	194 16 9
..	..	..	1,365	..	5 13 9	20 8 6	..	14 14 9
35 0 6	..	3 11 4	24,703	3,075	167 2 11	566 7 3	..	399 4 4
..	..	..	9,522	..	39 13 6	86 5 11	..	46 12 5
4 7 6	3 18 2	0 19 3	20,514	2,147	112 12 3	326 12 7	..	214 0 4
..	..	2 4 0	6,254	11	28 7 0	300 16 10	..	272 9 10
..	..	..	2,602	..	10 16 10	45 15 5	..	34 19 7
..	..	0 7 8	3,783	43	73 17 1	283 16 1	..	209 19 0
..	..	..	4,473	..	18 12 9	104 0 2	..	85 7 5
..	..	..	911	..	3 15 11	63 12 3	..	59 16 4
..	..	..	..	..	..	56 11 8	..	56 11 8
..	..	..	9,549	..	39 15 9	57 6 7	..	17 10 10
..	..	5 19 6	5,577	..	29 4 3	57 19 1	..	28 14 10
..	..	1 3 7	3,656	..	16 8 3	19 4 10	..	2 16 7
..	..	8 9 3	2,056	..	17 0 7	19 4 9	..	2 4
4 10 4	1 0 4	0 10 8	10,850	86	91 19 10	311 2 10	..	219 3
..	..	6 7 11	4,763	..	26 4 10	102 9 9	..	76 4 1
..	..	2 12 1	16,782	118	73 10 3	187 3 7	..	113 13
..	..	..	8,805	..	36 13 9	58 2 0	..	21 8
..	..	0 17 6	1,679	..	7 17 5	48 16 1	...	40 18
..	..	1 10 2	5,816	..	25 14 10	43 11 11	..	17 17
..	..	10 10 10	5,161	..	32 0 11	43 3 5	..	11 2
..	..	1 11 1	3,806	..	17 12 9	42 10 3	..	24 17
..	..	7 0 1	3,059	..	19 15 0	41 1 7	..	21 6
0 6 2	0 8 4	0 12 5	8,327	68	47 12 2	290 6 2	..	242 14
..	..	..	676	2	8 19 5	44 14 0	..	35 14
..	..	..	219	..	0 18 3	3 18 1	..	2 19 1
..	..	..	..	..	31 7 11	..	31 7 11	..
756 13 5	92 19 4	226 18 11	1,175,744	115,745	7135 8 10	11351 3 5	1104 9 1	5320 3

d Includes £40 rent received for portion of premises.
e Includes £57 7s. rent received for portion of premises.
f Includes £11 rent received for portion of premises.
g Includes £6 2s. 9d. rent received prior to erection of convenience.

TABLE NO. 17.

Showing the work done by the Drainage Department.

DATES	Total Number of Orders received	Number of Orders executed and in progress by the Owners after circular issued by the Drainage Department stating that the Corporation was about to proceed with the work				Number of Orders cancelled on account of property being dealt with by the Housing and Unhealthy Dwellings Committee, or owing to dangerous condition of walls	Number of Orders where the Drainage Department have done the work, also the number of Orders in progress, the cost of the work, and the apportionment thereof; also the number of Orders received from Owners to execute work without notice being served								
		Number of Orders executed	Number of Orders—Work in progress	Number of Houses included in the Orders	Number of Business Premises, Works, Public Buildings, etc.		Number of Orders executed	Number of Orders—Work in progress and in abeyance	Number of Orders received from Owners of Property	Number of Orders received from Public Health Committee and other Committees	Total number of premises dealt with under such Orders		Total Cost of Work executed	Apportioned to	
											Houses	Business Premises, etc.		Owners	Highways Department City Fund Account
													£ s. d.	£ s. d.	£ s. d.
From January 1st, 1929, to December 31st, 1929	1,159	199	..	321	16	70	723	167	123	228	691	271	9,805 11 2	8,499 6 9	1,306 4 5
From the formation of Department, April, 1896, to December 31st, 1929..	66,235	10,541	..	25,964	838	1,742	52,828	1,124	7,670	11,734	104,899	18,598	705,551 2 7	548,561 13 1	156,989 9 6

In addition to above, the Department has complied with 158 requests from owners for the supply of ashbins.

TABLE SHOWING THE CLASSIFICATION OF HOUSES INSPECTED IN EACH WARD DURING THE PERIOD FROM 1ST JANUARY, 1929, TO 31ST DECEMBER, 1929.

WARDS	Number of Houses Inspected	Number of Rooms								Good	Minor Defects	Serious Defects		Unfit: cannot be remedied	Business Premises	
		1	2	3	4	5	6	7	over 7			Remediable without reconstruction	Irremediable without reconstruction		Partial	Total
All Saints..	295	..	20	34	69	78	16	14	64	47	194	..	28	26	11	6
Ardwick	428	..	1	68	107	99	80	62	11	58	299	5	66	..	48	3
Beswick	386	..	2	4	239	139	1	..	1	167	209	1	9	..	17	..
Blackley	225	..	..	..	155	68	2	..	..	174	37	14	..	..	3	..
Bradford	160	..	..	11	108	39	2	..	..	28	105	27	..	..	5	..
Cheetham	267	..	..	1	33	91	120	22	..	71	116	73	7	..	19	5
Chorlton-cum-Hardy	429	..	..	7	316	73	32	1	..	184	245	..	..	..	13	..
Collegiate Church	272	..	..	2	57	64	103	33	13	202	60	..	8	2	24	4
Collyhurst..	390	..	1	29	234	70	35	17	4	217	171	..	2	..	57	1
Crumpsall	289	..	..	1	45	92	108	32	11	192	97	..	..	..	14	1
Didsbury	265	..	..	92	27	69	13	55	9	119	94	13	23	16	29	..
Exchange..	7	..	1	..	1	2	3	..	..	1	1	..	..	5	..	..
Gorton North	480	..	..	172	185	122	1	..	..	79	361	..	37	3	12	..
Gorton South	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Harpurhey	253	..	..	..	227	25	..	1	..	207	46	..	..	..	2	..
Levenshulme	277	..	..	16	18	220	17	4	2	207	65	..	5	..	30	..
Longsight	478	..	..	..	173	128	176	1	..	216	253	..	..	9	4	..
Medlock Street	335	..	16	63	220	29	4	2	1	9	..	..	35	291	36	..
Miles Platting..	391	..	29	21	328	10	2	1	..	289	50	..	52	..	7	..
Moston	238	..	..	..	98	136	3	1	..	208	29	..	..	1	5	..
Moss Side East	158	..	..	..	52	55	11	4	36	43	115	..	..	..	7	2
Moss Side West	424	..	..	2	75	178	72	88	9	241	176	2	5	..	19	..
New Cross	381	1	44	71	207	42	9	..	7	64	77	67	109	64	50	..
Newton Heath	251	..	..	34	164	43	10	..	..	207	33	10	1	..	21	..
Openshaw	326	..	..	83	118	76	45	3	1	115	145	55	..	11	7	..
Oxford	1	..	1	..	..	..	..	..	..	..	..	..	1	..	..	..
Rusholme	471	..	2	3	204	210	31	8	13	345	86	37	..	3	23	2
St. Ann's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. George's	503	..	7	68	250	83	85	6	4	3	339	87	56	18	59	16
St. John's	243	..	6	22	69	57	58	6	25	13	69	..	154	7	13	..
St. Luke's	273	1	22	26	192	29	1	1	1	22	198	1	..	52	8	..
St. Mark's	447	..	..	164	104	139	24	16	..	81	335	11	15	5	26	1
St. Michael's	456	..	16	20	336	58	19	3	4	139	159	131	6	21	39	..
Withington	343	..	..	1	93	111	58	51	29	158	141	29	15	..	17	..
TOTALS	10,142	2	168	1,015	4,504	2,635	1,141	432	245	4,106	4,305	563	634	534	625	41

TABLE B.

HOUSING AND TOWN PLANNING ACTS.

GENERAL CHARACTER OF THE HOUSES INSPECTED IN EACH WARD DURING THE PERIOD FROM 1ST JANUARY, 1929, TO 31ST DECEMBER, 1929.

WARDS	Lack of Free Ventilation	Deficiency of Light	Drainage	Paving	Want of Cleanliness	Dampness		Closets			Ashplaces		Defects		Overcrowding		
						From Ground	From Roof	W.C.'s	Pails	Privies	Bins	Boxes	Remediable	Irremediable	Over 2 Persons per Room	Over 2½ Persons per Bed-room	Social
All Saints	29	33	22	44	..	19	24	295	..	..	295	..	194	54	12	54	41
Ardwick	55	59	85	56	8	76	53	428	..	..	428	..	304	66	14	66	49
Beswick	9	8	62	41	..	61	78	386	..	..	386	..	210	9	5	59	54
Blackley	..	..	7	35	..	9	6	225	..	..	225	..	51	..	1	16	30
Bradford	..	..	51	82	..	59	54	160	..	..	159	1	132	..	5	38	43
Cheetham	5	5	36	56	5	96	30	267	..	..	267	..	189	7	..	23	8
Chorlton-cum-Hardy	..	..	37	101	..	14	48	429	..	..	429	..	245	..	3	55	63
Collegiate Church	9	4	6	11	..	2	37	272	..	..	271	1	60	10	4	58	30
Collyhurst	23	13	79	21	..	..	49	390	..	..	390	..	171	2	10	48	79
Crumpsall	..	..	16	77	..	..	35	289	..	..	289	..	97	..	..	4	6
Didsbury	18	26	35	50	2	64	29	250	..	15	243	..	107	39	10	27	24
Exchange	4	4	..	..	..	..	..	7	..	..	7	..	1	5	..	1	1
Gorton North	1	..	42	104	..	38	121	480	..	..	480	..	361	40	28	80	121
Gorton South	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Harpurhey	..	..	48	8	..	4	10	253	..	..	253	..	46	..	3	14	57
Levenshulme	..	5	32	33	..	13	5	277	..	..	277	..	65	5	3	8	5
Longsight	9	9	40	157	9	..	185	478	..	..	478	..	253	9	2	26	24
Medlock Street	252	275	21	50	4	3	24	335	..	..	335	..	..	326	18	71	87
Miles Platting	..	..	19	24	..	1	38	391	..	..	385	..	50	52	25	110	115
Moston..	..	..	6	8	..	1	4	238	..	..	238	..	29	1	..	16	15
Moss Side East	..	3	24	21	..	..	7	158	..	..	158	..	115	..	4	16	22
Moss Side West..	..	..	55	117	..	20	51	424	..	..	424	..	178	5	..	10	25
New Cross	74	24	42	20	..	10	125	381	..	..	380	..	144	173	36	109	90
Newton Heath	1	1	26	3	..	1	18	251	..	..	250	..	43	1	3	44	48
Openshaw	10	12	63	137	..	29	67	326	..	..	326	..	200	11	6	53	47
Oxford	..	..	1	..	..	..	..	1	..	..	1	..	..	1	2	36	41
Rusholme	..	..	13	37	..	27	39	471	..	..	471	..	123	3	1	7	6
St. Ann's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. Clement's	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
St. George's	68	46	55	99	..	2	44	503	..	..	503	..	426	74	23	92	76
St. John's	151	155	20	15	..	1	11	240	3	..	243	..	69	161	6	52	19
St. Luke's	29	35	40	38	5	24	14	273	..	..	273	..	199	52	10	59	55
St. Mark's	5	4	45	88	2	46	49	447	..	..	447	..	346	20	29	92	65
St. Michael's	14	7	31	25	..	1	31	456	..	..	456	..	290	27	11	94	103
Withington	..	5	33	67	..	56	34	343	..	..	335	..	170	15	..	30	17
TOTALS	766	733	1,092	1,625	35	677	1,325	10,124	3	15	10,102	2	4,868	1,168	274	1,468	1,466

TABLE C.

HOUSE TO HOUSE INSPECTIONS, 1929.

This Table is comparable with figures given in the Census Report, 1911.

No. of Rooms per Tenement	No. of Individuals in Private Families or Tenements			No. of Individuals per Room			No. of Children under 10 years per Family or Tenement			Overcrowding		
	Families or Tenements	Population	Individuals per Family or Tenement	Rooms	Population	Individuals per Room	Families or Tenements	Children under 10	Children per Family or Tenement	Registrar-General's Standard	Manchester Standard	Social Standard
One	2	2	1·0	2	2	1·0	2	—	—	—	—	—
Two	168	608	3·6	336	608	1·8	168	210	1·2	38	90	42
Three ..	1,015	4,429	4·4	3,045	4,429	1·4	1,015	1,069	1·1	123	257	247
Four ..	4,504	17,865	4·0	18,016	17,865	1·0	4,504	3,464	0·8	97	815	1,091
Five	2,635	10,557	4·0	13,175	10,557	0·8	2,635	1,504	0·6	11	179	57
Six	1,141	4,852	4·2	6,846	4,852	0·7	1,141	699	0·6	2	100	20
Seven ..	432	1,819	4·2	3,024	1,819	0·6	432	272	0·6	—	5	1
Over Seven	245	1,568	6·4	—	—	—	245	224	0·9	3	22	8
TOTALS	10,142	41,700	4·11	44,444	40,132	0·90	10,142	7,442	0·7	274	1,468	1,466

STATEMENTS FROM THE MARKETS DEPARTMENT.

The Medical Officer of Health is indebted to Mr. A. Chadwick, Genera Superintendent, for the following particulars relating to the operations of th Markets Department during the year ending 31st March, 1929.

At the City Abattoir and Wholesale Meat Market the business has considerabl increased during the past 29 years, as is shown in Statement "A" attached.

The bulk of the meat, fish, fruit, etc., which is condemned is found to b unfit for food on arrival at the markets, railway stations, wholesale house etc., and by the system which operates of carrying out an efficient inspectio at the centre of distribution, the risk of diseased meat, etc., being expose in retail shops is lessened.

Statement " B " shows the total condemnations in the City, and Statemen "C" the total weight of meat condemned at the City Abattoir.

Statement "A.

ANIMALS SLAUGHTERED AT CITY ABATTOIR DURING CERTAIN YEARS.

Year ending 31st March	Cattle	Sheep	Lambs	Calves	Pigs
1900	34,675	106,855	45,595	872	18,163
1910	38,389	193,855	57,553	2,179	10,486
1920	89,143	214,363	48,656	8,202	9,636
1921	44,278	116,407	46,004	6,432	12,747
1922	53,348	232,581	57,159	5,359	19,601
1923	65,138	222,875	97,087	5,631	17,897
1924	55,332	192,906	78,739	3,364	15,662
1925	60,171	252,382	80,474	3,667	19,168
1926	54,027	271,127	76,460	5,192	16,106
1927	55,054	275,571	94,173	5,401	13,623
1928	65,386	330,894	111,286	5,518	18,584
1929	68,510	308,361	134,489	5,343	18,803

Statement

TOTAL CONDEMNATION OF VARIOUS FOODSTUFFS DURING CERTAIN YEARS.

	1922	1923	1924	1925	1926	1927	1928
	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Meat	361¾	332½	325¼	406¼	342	386¼	426
Fish	195½	133¾	110	83¼	91½	181¼	111¼
Fruit	30½	55¼	61¾	85¼	74¼	72½	31½
Vegetables..	93¾	82¼	64½	207	261½	149	81¾
Eggs (number)....	32,828	34,001	29,922	95,368	14,739	2,595	15,781
Game (head)	1,606	78	386	3,350	1,342	1,789	2,089
Poultry (head)....	5,769	4,332	6,192	4,870	4,712	5,695	3,608
Rabbits (head).....	54,319	13,842	19,021	20,611	14,290	12,861	12,780
,, (tinned)...	..	..	..	..	..	..	..

Statement "C."

MEAT CONDEMNED AT THE CITY ABATTOIR AND WHOLESALE MEAT MARKET DURING CERTAIN YEARS.

	1922	1923	1924	1925	1926	1927	1928	1929
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
veight of meat condemned at City Abattoir and Wholesale Market	310½	287¼	293¼	370½	311¼	353¼	399	379
ch the weight of dressed meat igned from places other than City was	151¾	139½	168¾	171¾	121¼	151½	136	142¾
d in which were Imported s amounting to	7½	8¾	2½	2¾	5¼	3¼	5½	½

AMOUNT OF UNWHOLESOME FOOD CONDEMNED DURING THE YEAR ENDING 31ST MARCH, 1929.

	1927-28	1928-29
MEAT :—	LBS.	LBS.
Beef	819,485	777,484
Mutton	33,807	39,144
Veal	16,173	12,468
Venison..	606	—
Pork	72,007	83,022
Imported Offal	12,199	1,359
	954,277 = 426 tons	913,477 = 407¾ tons
FISH :—		
Fish	214,089	236,144
Shellfish	35,056	29,749
	249,145 = 111¼ tons	265,893 = 118½ tons

FOOD CONDEMNED DURING THE YEAR—*continued*

	1927-28	1928-29
GAME	HEAD 2,089	HEAD 1,097
POULTRY	3,608	3,153
RABBITS	12,780	5,325
FRUIT	LBS. 70,449 = 31½ tons	LBS. 64,034 = 28½ tons
VEGETABLES	183,140 = 81¾ tons	297,217 = 132¾ tons
MISCELLANEOUS :—		
Eggs	NO. 15,781	NO. 786
Condensed Milk	LBS. 296	LBS. 790
Sundry Provisions	84	649

With the exception of the following, which were seized while deposite or exposed for sale, the above quantities were surrendered after bein condemned by the Inspectors of the Department :—

	1927-28	1928-29
Meat	LBS. 1,917	LBS. 517
Fish	276	840
Fowl	..	..
Rabbits..	29	..
Fruit	..	..
Poultry	7	10

NOTE.—The term "surrendered" includes cases in which the Inspectors have discovered the diseased meat, etc., in the course of their duty, but in which, owing to salesman's acceptance of the Inspector's decision, it has been deemed unnecessary to obtain a magistrate's order prior to destruction.

PARTICULARS RELATING TO THE OPERATIONS OF THE CLEANSING DEPARTMENT.

The Medical Officer of Health is indebted to Mr. Jones, Director of Public Cleansing, for the following particulars relating to the operations of the Cleansing Department during the year ending 31st March, 1929.

The administration of the Cleansing Department of the City of Manchester is under the supervision of a Director, with a staff of about 77 officials and about 1,939 workmen.

For Departmental purposes the Cleansing of the City is divided into a House and Trade Refuse Section and a Street Cleansing Section.

The work of the House and Trade Refuse Section includes the emptying of old privies and pail closets and the collection and disposal of household refuse; whilst the Street Cleansing Section deals principally with the cleansing of the streets and disposal of refuse collected therefrom.

The extent of the Department's operations may be gathered from the following general statistics:—

The net expenditure of the Department, including loan charges, amounted to:—

	£	s.	d.
House and Trade Refuse Section	206,287	4	0
Street Cleansing Section	159,441	7	8
	£365,728	11	8

House and Trade Refuse Section.

There are within the City 177,120 dwelling-houses, 19,840 shops, 3,666 factories, and 3,643 workshops. From these premises during the past year there were collected and disposed of 178,778 tons of ashes, 4,783 tons of night-soil and pail contents, 21,973 tons of warehouse and trade refuse, 5,949 tons of slaughter-house refuse, 1,872 tons of stable manure, and 1,163 tons of fish refuse.

Previous to 1872 the midden-privy system was in operation, but the Corporation then decided upon the introduction of what is known as the pail-closet system, the scarcity of water preventing the adopting of the water-carriage method. Since the water difficulty has been solved the conversion of pail-closets into water-closets has been proceeded with, and is rapidly nearing completion. There are now only 73 privies and 957 pail-closets within the City.

In later years it was decided to replace the wooden ash-boxes by galvanized iron receptacles with lids, and there are now 195,619 of the latter.

TABLE SHOWING NUMBERS OF PRIVIES, PAILS, ASH-BOXES, AND ASH-BINS FOR PERIOD 1912-1929.

Year	No. of Privies (with Ashpits)	No. of Pails	No. of Wooden Ash-boxes	No. of Galvanized Iron Ash-bins with Lids
1912	1,982	10,000	50,421	88,762
1913	292	3,850	41,645	101,239
1914	218	2,128	31,875	112,843
1915	157	1,710	24,677	121,191
1916*	236	1,671	16,653	142,107
1917	230	1,665	12,469	146,246
1918	230	1,633	11,230	147,616
1919	217	1,327	8,011	151,609
1920	217	1,326	4,827	153,962
1921	217	1,322	2,181	156,587
1922	217	1,310	1,681	160,347
1923	217	1,300	1,440	165,165
1924	217	1,244	1,140	168,905
1925	217	1,229	940	171,184
1926	217	1,225	716	183,930
1927	80	1,148	520	187,242
1928	73	1,127	—	191,814
1929	73	957	—	195,619

* District of Withington incorporated.

The removal of domestic refuse takes place once a week.

The fleet of barges for removal of refuse is now 13.

Fifteen motor and 46 horse-sweeping machines are employed on the streets, a total of 52,806 loads of sweepings, litter, etc., being collected.

General.

The total weight of material dealt with by the House and Trade Refuse and Street Cleansing Sections of the Department during the year was 267,664 tons, being equal to, say, 890 tons per working day.

TABLE SHOWING THE DISPOSAL OF MATERIAL COLLECTED TWELVE MONTHS ENDING MARCH, 1929.

House and Trade Refuse.

	Tons
Incineration	125,548
Boat to Estates	43,713
Rail to Estates	2,637
Sales to Farmers	2,500
Concentrated Manure Manufacture	1,956
Salvage	1,534
Tipping	36,423
Mortar Manufacture	272
Meat Products	275
	214,858

Street Cleansing.

	Loads
Incineration	1,314
Boat to Estates	16,075
Tipping	16,864
Sales to Farmers	288
Rail to Carrington	13,439
Drainage	4,826
	52,806

The amount of refuse taken to the Carrington and Chat Moss Estates since they were purchased by the Corporation is as follows:—

Chat Moss Estate	1,615,007 tons	in 31 years.
Carrington Estate	1,179,193 ,,	41 ,,

The estates are divided among 58 tenants, occupying an aerodrome, farmsteads, and nurseries.

The Corporation erected the farmsteads, together with an adequate supply of town's water. There are 2 railway sidings on the estate and 2 wharves on the Ship Canal. The market value of the estates has considerably increased since their purchase, chiefly through cultivation and owing to the proximity of the Manchester Ship Canal.

The disinfecting station is situated at the Oldham Road Depot of the Cleansing Department. The following table gives details of the articles disinfected :—

ARTICLES DISINFECTED AT OLDHAM ROAD DEPOT, YEAR ENDING MARCH 31ST, 19

Month ending	Blankets	Sheets	Pillows	Bolsters	Quilts	Mattresses	Beds	Carpets	Clothing	Sundries	
1929											
April	1,195	167	452	116	269	410	202	28	460	356	3,
May	636	211	477	157	294	168	198	87	777	241	3,
June	1,085	179	411	142	240	164	190	10	511	187	3,
July	489	216	582	140	289	194	228	6	468	292	2,
August	725	210	485	160	276	182	245	10	320	157	2,
September ..	745	250	573	171	350	183	300	4	591	195	3,
October.. ..	1,718	298	695	211	499	246	344	11	664	719	5,
November ..	749	326	727	229	492	240	332	11	782	226	4,1
December ..	757	282	681	212	462	233	294	11	724	238	3,8
1930											
January ..	770	342	741	217	515	256	364	3	739	450	4,3
February ..	812	337	761	221	551	216	274	18	731	268	4,1
March	820	306	785	189	488	254	329	7	629	376	4,1
Totals ..	10,501	3,124	7,370	2,165	4,725	2,746	3,300	206	7,396	3,705	45,2

Steam Disinfector	42,557	Articles.
Formic Aldehyde Chamber	1,770	292 Mattresses. 1,478 Clothing.
,, ,, ...	911	Books.
	45,238	Total.

VETERINARY AND MILK CONTROL DEPARTMENT.

By Lieut.-Col. J. W. Brittlebank, C.M.G., M.R.C.V.S., D.V.S.M. (Vict.),
Chief Veterinary Officer.

The ground covered by this section of the public health department in 1929 shows little change from the previous year in the main essentials.

It is gratifying to be able to report the considerable improvement in some directions—notably in the milk supplied from outside the city as regards tuberculous infection, and also with regard to ice cream manufacture, the figures of which will be reviewed later. The other phases of the work have shown steady progress, and there has been a tightening-up in the administration of the various Acts and Orders and an increase in the numbers of prosecutions taken during the year.

Country Farms.—In 1929 the mixed milk from 697 country farms was examined (as against 694 farms in 1928), the details being given in Table III. of the Appendix.

The percentage of country milks found to be tuberculous—12·62 per cent.—shows a decrease of 5 per cent. compared with the figure for 1928. Whilst this is undoubtedly gratifying, the figure is still too high, and there is one feature of this side of the work which is far from satisfactory, *i.e.*, the number of cases of tuberculosis in an advanced stage found on inspection by the Veterinary Officers—pulmonary cases and udder cases. There can be no doubt that these cases would be dealt with much earlier under a system of routine veterinary inspection, in fact they would never reach such an advanced stage. The major proportion also of the less advanced cases would be found correspondingly earlier than they are at present. Until some such system is established there will always be a possibility, or even a likelihood, of the percentage of tuberculous infection in the milk supply showing an increase from time to time.

During the year 1,327 samples of milk were taken, and on reference to Table II. of the Appendix it will be seen how this number is arrived at. An interesting comparison can be made by comparing the respective figures for samples taken by the Food and Drugs Inspectors at (*a*) railway stations and (*b*) vehicles entering the city by road in 1928 and 1929. Out of a total number of 743 samples, taken in 1928, 353 were taken at railway stations and 390 from road vehicles, whilst in 1929 out of a total of 850, 176 were taken at railway stations and 674 from road vehicles. This large increase in the amount of milk coming into the city by road creates more difficulty in obtaining the samples than formerly:

City Farms.—The number of farms remaining in the city is 46, with accommodation for 950 cows, there being no change from the previous year. The same methods of inspection have been carried out, and, for the most part, there has been no cause for complaint regarding the general health and condition of the cows. Considering the handicaps attendant on the keeping of dairy cows in a city such as Manchester, the farmers are mainly to be commended on the general condition of their stock.

Three cases of tuberculosis of the udder were found in the city herds during the year. In two of these the condition was not advanced, whilst the third was a newly-purchased cow which developed very rapid tuberculosis after parturition as is so often the case. This cow was dealt with under the Tuberculosis Order, 1925, immediately on detection.

City Dairies.—The work as regards dairies in the city proceeds slowly but steadily in the direction of meeting modern requirements. Since 1928 another large dairy firm has been granted a licence to pasteurise milk, and it would seem that the opposition to this grade of milk is diminishing, as the general public is getting a clearer idea of the meaning of the designation and the advantages of its use. There is also much less opposition than formerly to the use of bottles for milk distribution, though there is still some way to go before the old method of can delivery becomes extinct, desirable though this end is. Such difficulties as loss of bottles through breakages (both in delivery and in sterilisation), non-returning of empties, etc., are being gradually overcome, and there is no doubt that the demand for bottled milk will increase.

The appearance on the market of wax papier-mâché containers—which after being used once are destroyed—is the latest attempt to improve upon or replace the bottle as a receptacle for milk, but so far, in this area at least, this method is too much in its infancy for an accurate forecast to be made as to its chances of becoming a permanent factor in the delivery of milk.

In the Annual Report for 1928 mention was made of the position of the smaller dairymen, and as predicted therein, the progress in this direction has been slower, but it is very pleasing to be able to report that quite a number under this heading have reconstructed their premises whilst others have schemes under consideration.

As previously stated, it was considered advisable to take rather more prosecutions in 1929 than in the previous year, the number being 13 as against 4 in 1928. Details of these will be found at the foot of Table VI. of the Appendix. In all these prosecutions convictions were obtained.

In addition to the above, an appeal was lodged against the decision of the City Council to remove a dairyman from the Register of Milk Purveyors in respect of his premises on the grounds that the premises were unsatisfactory for a dairy. This appeal was dismissed by the Stipendiary Magistrate.

In Table V. of the Appendix it will be noticed that there is very little change in the number of licences issued under the Milk (Special Designations) Order, 1923. As in 1928, there is only 1 Grade A milk producer within the city, one dealer's licence to sell Grade A (Tuberculin Tested) milk, and 2 dealers' licences to sell Grade A milk. The number of dealers' licences to sell milk as "Certified" has decreased from 19 to 17. One further licence to pasteurise milk has been granted and 1 shop has been granted a dealer's licence to sell pasteurised milk.

Retail Milkshops.—As regards this aspect of the work, comparable progress has been made in the gradual elimination of the more unsatisfactory premises where loose milk is sold. The lines adopted have been similar to previous years, and the number of registered milkshops and dairies has decreased from 1,328 to 1,073. The figure at the end of the year, *i.e.*, 1,073, is roughly one half of the number on the register in 1925, and it is safe to say that the vast majority of the premises removed from the register were totally unsatisfactory in some way or other. It is probable that there will be a still further reduction in this number in the future.

New applications numbered 122, and of these 23 were withdrawn before consideration by the committee, another 23 were refused registration, and the remaining 76 were approved. A comparison between these figures and those of the previous years seems to indicate that the applicants are now realising what the requirements are and consequently applications for registration of unsuitable premises are becoming more infrequent.

Eight persons were struck off the register during the year, and 64 persons were found selling milk unregistered. This latter figure again shows a decrease as compared with 1928, although the decrease is small. There will probably be a further decrease next year, especially in view of the increased number of prosecutions taken recently for this offence.

The Milkshops Inspectors have paid 5,050 visits to milkshops during the year, and the conditions found generally show an improvement, particularly in cleanliness. Other details of this section of the work will be found on reference to Table VI. in the Appendix, where it will be noticed on comparison with 1928 that there are fewer "premises found dirty," and also many fewer milkshops found with unsatisfactory washing accommodation.

Ice Cream.—The number of persons manufacturing ice cream in the city remains about the same (460) as far as can be ascertained. The position, however, is still unaltered as regards legislation, and there are many persons making ice cream at certain periods of the year only. Control of these is exceedingly difficult. It is probable that powers will be obtained before long which will give the City Council authority to enforce registration of premises used for the manufacture of ice cream. It would then be possible to improve the general conditions now existing and bring them more into line with the present requirements for dairies. There is unfortunately no further progress to report regarding that section of the trade referred to in the report for 1928, but the negotiations are still proceeding.

The Milkshops Inspectors have paid 1,727 visits to ice cream premises during 1929, as against 1,635 in 1928, and their efforts have been mainly directed towards ensuring thorough cleanliness of the premises and utensils. The figures in Table IV. of the Appendix compare favourably with those of 1928, inasmuch as the numbers of persons who were warned for having dirty utensils, uncovered mixture, dirty clothing, and dirty premises, show a decrease in each case despite an increase of 92 in the number of visits made.

Manchester Corporation Hospitals Milk Supply.—The farms supplying milk to Monsall Hospital and Baguley Sanatorium have been under the supervision of the Chief Veterinary Officer as in previous years. The former high standard of milk production has been maintained and the farmers are to be congratulated on their efforts. Regular sampling of the milk has been carried out and examinations made for bacterial count, dirt estimation, and tuberculous infection. The results of these examinations have been very satisfactory.

During the year there has been a continuance of the excellent relations existing between the Department and the Manchester, Salford, and District Milk Dealers' Assocation, and I desire to express again my thanks to their very able Secretary, Mr. Shenton.

I would also express my appreciation of the services of my staff, and to place on record my gratitude for their loyal and devoted assistance.

TABLE I.

City Farms.	
Total number of farms in City .. .. Accommodation for 950 cows.	46
Number of visits paid to farms by Veterinary Officers	172
,, cowsheds inspected	370
,, cows examined	2,774
,, samples taken	29
,, cows suffering from tuberculosis of the udder	3
Country Farms.	
Number of visits paid to farms by Veterinary Officers	158
,, cowsheds inspected	435
,, cows examined	4,433
,, cows found with tuberculous udders	74
,, cows removed from farms prior to visits of Veterinary Officers	34

TABLE II.

MILK SAMPLES.

Total number of samples taken during the year	1,327
Samples Examined for Tubercle Bacilli.	
Collected by Food and Drugs Inspectors at—	
(*a*) Railway Stations	176
(*b*) Vehicles entering the City by road	674
Collected by Milkshops Inspectors at—	
(*a*) Day Nurseries and Hospitals	77
(*b*) City Dairies and Railway Stations	44
(*c*) Vehicles entering the City by road	127
Number of samples taken from farms by Veterinary Officers ..	40
Number of samples not examined from various causes	6
Number of samples proved to cause tuberculosis	†110
Samples Examined for Chemical Analysis, Bacterial Count, Bacillus Coli, etc.	
Collected by Milkshops Inspectors at Hospitals, Dairies, Vehicles, etc.	*425

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* Of these, 236 were also examined for Tubercle Bacilli.

† This figure includes 14 control samples.

TABLE III.

SAMPLES OF MILK TESTED FOR TUBERCLE BACILLI.

Results of Examinations of Samples taken from January 1st to December 31st, 1929.

County	No. of Farmers represented by Samples of Milk	No. of Farmers sending Tuberculous Milk	Percentage
Cheshire	350	45	12·85
Lancashire	91	9	9·89
Derbyshire	100	13	13·0
Staffordshire	130	18	13·84
Shropshire	2	..	..
Westmoreland	2	..	..
Cumberland..	12	..	..
Montgomeryshire .. .	3	..	..
Yorkshire	7	3	42·85
Lincolnshire	..	..	..
Totals	697	88	12·62

TABLE IV.

ICE CREAM.

Number of persons on register—December 31st, 1929	466
,, visits by Milkshops Inspectors	1,727
,, applications for permission to manufacture	27
,, applications to manufacture ice cream refused	25
,, premises in disrepair	8
,, persons warned for dirty utensils	55
,, ,, ,, uncovered mixture	41
,, ,, ,, dirty clothing	14
,, ,, ,, dirty premises	156

Table V.

Milk (Special Designations) Order, 1923.

Licences issued during the year 1929.

Producer's licence to use the designation "Grade A"	1
Dealer's licence to use the designation "Certified"	17
Dealer's licence to use the designation "Grade A (Tuberculin Tested)"	1
Dealer's licence to use the designation "Grade A"	2
Dealer's licence to use the designation "Pasteurised":—	
(*a*) Pasteurising establishments	15
(*b*) Shops	1

Table VI.

Milk and Dairies (Consolidation) Act, 1915, and Order.

Number of registered premises—December 31st, 1929	1,073
,, visits to dairies and milkshops by Milkshops Inspectors..	5,050
Total number of applications for registration	122
Number of applications approved by Committee	76
,, applications refused by Committee	23
,, applications withdrawn before consideration by Committee	23
,, persons struck off register by resolution of City Council..	8
,, persons found selling milk unregistered	64
,, milk vessels uncovered	50
,, milkshops found dirty	180
,, premises in disrepair	18
,, unsatisfactory washing accommodation	128
,, milk conveyances found dirty	23
,, milk conveyances without name and address	25
,, milk purveyors found bottling milk in street	2
,, sites inspected for new dairies	17
,, persons warned for opening sealed bottled milk	17
,, prosecutions taken in respect of bottling milk in street	2
,, prosecutions taken in respect of persons selling milk not being registered for such purpose	6
,, prosecutions taken in respect of dirty premises	2
,, prosecutions taken in respect of dirty vehicle	1
,, prosecutions taken in respect of using vehicle without name and address on same	1
,, prosecutions taken in respect of not taking practicable precautions to prevent milk from becoming contaminated	1

TABLE VII.

Number of Farmers' Milk tested during the year	Total number found to cause Tuberculosis in the experimental animal	Percentage of Farmers sending Tuberculous Milk	Percentage of Farmers from EACH COUNTY whose Milk was proved to cause Tuberculosis									
			Cheshire	Derbyshire	Staffordshire	Shropshire	Lancashire	Yorkshire	Cumberland	Montgomeryshire	Westmoreland	Lincolnshire
272	27	9·90	10·46	9·23	8·00	10·00	..	..	..	..	..	..
345	36	10·40	12·72	8·65	4·01	..	8·31	..	..	..	..	..
329	45	13·60	14·76	9·58	15·15	40·00	..	..	..	..	..	.
318	29	9·10	11·17	6·02	..	..	7·14	25·00	..	..	..	..
565	47	8·30	10·26	6·00	6·38	..	2·98	12·50	..	..	..	..
542	42	7·70	8·60	6·50	9·30	12·50	4·00	..	..	..	..	..
562	38	6·76	7·71	4·48	6·94	12·50	3·70	..	..	..	..	..
289	27	9·34	11·56	6·25	7·70	..	2·94	12·50	..	..	..	..
535	31	5·79	4·80	7·47	8·57	11·11	3·33	..	..	..	..	..
468	30	6·41	6·20	8·69	5·55	..	..	..	..	..	..	..
494	51	10·32	11·11	2·50	12·12	10·00	12·20	50·00	..	..	..	..
484	54	11·15	12·94	4·00	10·20	33·33	6·00	10·00	..	..	..	..
486	60	12·51	13·99	11·58	9·26	33·33	5·88	20·00	..	..	..	..
352	34	9·66	12·39	8·19	..	..	2·77	..	..	..	..	..
69	9	13·04	16·21	..	..	..	13·63	..	..	..	..	..
321	38	11·83	11·59	8·80	13·04	..	6·97	..	..	..	..	..
365	37	10·13	13·54	9·30	4·30	..	11·70	..	..	..	..	..
288	18	6·25	8·17	5·12	4·16	..	3·57	..	..	..	..	..
240	20	8·30	8·84	8·00	4·55	..	8·10	..	..	..	..	..
194	29	14·94	18·75	10·71	..	..	5·88	..	..	..	..	..
305	37	12·13	16·23	4·17	..	..	10·52	..	..	..	..	..
243	21	8·64	10·52	6·34	6·66	..	3·57	..	..	..	..	..
296	33	11·14	12·94	7·14	10·34	..	9·75	..	..	..	..	..
453	43	9·49	10·80	8·69	8·82	..	5·12	..	..	..	..	..
292	24	8·21	10·00	11·86	4·34	..	..	..	..	..	..	..
474	49	10·33	12·26	11·76	6·94	..	5·76	..	..	..	..	..
604	67	11·09	14·11	4·62	6·52	..	14·81	..	..	..	..	..
694	122	17·57	18·10	24·50	16·83	33·33	10·00	..	22·22	50·00	..	..
697	88	12·62	12·85	13·0	13·84	..	9·89	42·85	..	..	..	..
11576	1186	10·24	..	..	..	..	..	..	..	..	..	..

Table VIII.

SOURCE OF SAMPLES			NUMBER OF SAMPLES EXAMINED FOR TUBERCLE BACILLI				Number of visits paid to Farms	Number of Cows Examined	COWS WITH TUBERCULOUS UDDERS		
			Primary and Subsequent	Control	Total	Positive Results			Found	Slaughtered under Tuberculosis Order, 1925	Removed from Farm prior to visit
By Food and Drug Inspectors	Railway Stations		146	30	176	*18	..	..	..	..	..
	Carts and City Dairies ..		619	55	674	†77	..	..	..	..	..
By Milkshops Inspectors	Nurseries and Hospitals (Mixed)		77	..	77	..	..	..	..	..	..
	Carts, City Farms, City Dairies, and Railway Stations		161	10	171	§7	..	..	..	..	..
By Veterinary Officers	Country Farms	Individual	..	..	..	3	158	4,433	74	74	34
		Group ..	11	..	11	..					
	City Farms	Individual	21	..	21	2	172	2,774	3	3	..
		Group ..	8	..	8	3					
Totals			1,043	95	1,138	110	330	7,207	77	77	34

* Includes 4 control samples proved positive.

† Includes 7 control samples proved positive.

§ Includes 3 control samples proved positive.

SPECIAL REPORTS

BY THE

MEDICAL OFFICER OF HEALTH.

MANCHESTER COMMITTEE ON CANCER.

The Manchester Committee on Cancer has continued to give special attention during the past year to the investigation of the cancer-producing properties of mineral oils and the possibility of removing harmful compounds from them in such a manner that they can be used commercially without increasing their cost or diminishing their lubricating qualities. They have also investigated the cancer-producing properties of some animal and vegetable oils.

The scientific papers published by its research workers and the reports of the Committee have attracted wide notice in English, Continental, and American scientific journals, in home commercial circles, and in the lay press as marking a distinct and practical advance in the problem of the cause and prevention of cancer. In a leading article the *British Medical Journal* refers fully to the work as apparently capturing a key position in the struggle. Amongst those interested commercially are two of the largest oil producing companies in the world, which have recognised the importance of our endeavours to find a safe lubricating oil, and at reasonable cost. Both companies sent their medical and scientific directors to see our work and are anxious to help us as much as possible.

The work of recording cases of cancer of the breast and internal organs at the hospitals has been discontinued during the past year, sufficient facts having been collected in these matters for the present. The total number of cases of breast cancer investigated by the Committee has been 300.

Dr. Gretta Mary Wardle has given addresses to midwives, nurses, voluntary workers, and women's meetings on the forms of cancer which specifically affect women, which were much appreciated by those who heard them. In prosecution of the wider appeal for funds in Lancashire, Cheshire, and North Wales, addresses have also been delivered in Manchester and other Lancashire towns by various medical members of the Manchester Committee on Cancer.

Dr. Gretta Mary Wardle terminated her engagement with the Committee on March 31st, 1929. The Committee take this opportunity of thanking her for the very efficient way in which she carried out her duties.

The Committee regret that they have lost the services of Dr. Powell White through ill-health. Dr. Powell White's work for the Committee, with his world-wide reputation as a leading cancer expert, has been invaluable, and the Committee record their grateful thanks to him for his assistance.

They would like to record their appreciation of the keen devotion of their scientific staff to their research work.

SCIENTIFIC REPORT.

During the past twelve months tars have been prepared with the temperature of the furnace tube at 500, 600, 750, 850, and 950° C. in order to ascertain at what temperature carcinogenic compounds are formed in commercial tar and shale retorts. The relative activity of tars so obtained was 0, 12, 24, 100, and 64, from which it appears that carcinogenic compounds begin to be synthetised between 500 and 600° C. and that the maximum yield is at a temperature between 800 and 900° C.

We have continued our investigations on the concentration of the active principle in our synthetic tar, the potency of which is gradually being augmented. We have now tars which are at least 100 times as powerful as shale oil.

A few compounds which are apparently pure, or almost pure, have already been isolated from the above-mentioned tars, and attempts are being made to determine the chemical constitution of the compounds.

Investigations have been carried out on the effect of increasing the frequency of the applications of suspected agents. It has been found that if the number of applications per week is increased from 2 (former standard procedure) to 5, tumours appear more quickly and their incidence rises considerably, the rise being relatively greater the weaker the agent under consideration. According to the method we have devised for the estimation of carcinogenic potency, the potency of shale oil is increased approximately fourfold and the potency of natural petroleum oils about 50 fold by increasing the number of applications per week from 2 to 5. These results lead us to the conclusion that natural petroleum oils have a carcinogenic activity nearer to that of shale oil than we had previously imagined. It is our intention in the future to use more frequent applications as a routine method for the diagnosis of carcinogenicity.

The procedure we adopted previously for the detoxication of oils by means of sulphuric acid entailed the utilisation of a very large amount of acid. We are now endeavouring to ascertain the minimal amount of acid which can be used with safety in order to render an oil harmless.

Applying the standard experiment, we have found that samples of olive oil, neatsfoot oil, and sperm oil tested by us did not produce cancer. This is in keeping with the results obtained by various observers working with other animal and vegetable oils.

The natural skin fat is an important factor in the prevention of experimental cancer.

We have found that if lanolin (a natural animal fat) is applied to the skin in the interval between synthetic tar applications the development of tumours is substantially delayed. In the case of shale oil, lanolin has in our experiments given almost absolute protection when its applications are at least twice as frequent as those of the shale oil. When alternate applications of shale oil and lanolin are given the protection is much less marked.

The Committee do not consider that they are in a position to express publicly any opinion on proprietary brands of lubricating oil, the constitution of which is unknown, but they give in this report a statement concerning oils which, so far, have been found to be non-cancer producing.

FUTURE WORK.

The Committee again expresses its thanks to the Council of the University for affording the necessary accommodation for the scientific staff. An arrangement has been made with it for a consultative committee consisting of six members of the University and six members of the Manchester Committee on Cancer, including representatives from the Christie Hospital and the Radium Institute, to supervise the research work in the University.

The Anglo-Persian Oil Company are sending, at their own expense, one of their research chemists to Manchester to assist our scientific staff in investigating the nature of the cancer-producing properties of mineral oils and tar.

The Shell Mex Oil Co. are providing mineral oils in forms which our scientific staff desire to test, and they are also sending crude oils from their world-wide sources of supply.

The Committee has had to enlarge its scientific staff to deal with the increased work arising out of the additional materials provided by the oil companies and to expedite the investigation of the problem of mule spinners' cancer—an urgent one for all cotton workers and employers—as much as possible.

FINANCE.

The annual financial statement for the year ending October 31st, 1929, is appended.

The appeal for funds for cancer study made in Lancashire, Cheshire, and North Wales has resulted in the sum of about £21,500 being credited to the Manchester Committee on Cancer; of this £2,000 has been allocated for the study of the uses of radium in the treatment of cancer and for investigating new methods of its application. This will be carried out at the Manchester Radium Institute.

While the balance is sufficient for its immediate needs the Committee will welcome further funds, to extend its research in a new direction into the effect of mineral oil in causing cancer, for the clinical study of cancer in all its forms, and for the education of the public in the great importance of the early treatment of the disease.

MANCHESTER AND DISTRICT REGIONAL SMOKE ABATEMENT COMMITTEE.

This Committee has continued its activities during the year. The Executive Committee met six times, and the full Regional Committee, consisting of the representatives of all the associated authorities, met twice in accordance with the standing orders of the Committee.

The membership is the same as in the previous year, the number of authorities represented being 72 out of the 102 authorities lying in the regional area, *i.e.*, within a radius of 15 miles from Manchester.

An important addition to the membership of the Executive Committee giving an official representation upon the Committee to organised industry has been made. Through the Ministry of Health, the Federation of British Industries approached the Regional Committee with the suggestion that in order to encourage closer co-operation with manufacturing concerns it would be helpful for them to have a direct representative on the Regional Committee, with the result that Daniel Adamson, Esq., D.Sc., M.I.C.E., M.I.M.E., was co-opted on the Executive Committee, and his expert knowledge will no doubt be of valuable assistance.

The work and influence of the Committee is steadily growing, and at the meetings—expecially those of the Executive Committee—a remarkable amount of thoughtful discussion of the many aspects of the problem of smoke abatement—both domestic and industrial—has taken place, based mainly upon practical issues raised by the representatives of the local areas.

Actual progress is bound to be slow, for no action taken to effect smoke abatement can be acceptable which will interfere to any real extent either with industrial activity or with the natural and reasonable amenities of domestic life. The Regional Committee is very alive to the need of the observance of this principle, and from its deliberations it is desirous that only such action be taken and such information disseminated as will lead to increased public welfare in all respects. It is notable that the importance and value of regional action for the control of smoke emission is steadily gaining recognition throughout the area.

Joint action with the National Smoke Abatement Society has been continued. Over 137,000 leaflets have been sold during the year—principally to the local regional health authorities for distribution in their areas.

During the year, also, the Executive Committee, working through a small committee of practical and expert members, issued a pamphlet, entitled "Smoke Abatement and Fuel Economy in Steam Boiler Practice." This brochure is intended to guide and assist manufacturers, managers, engineers, and all who use coal for steam raising. Over 6,600 copies have been sold to local health authorities for distribution, and other regional smoke committees and health authorities have been supplied with specimen copies at their request.

Contact with the practical side of the industrial use of coal has been also maintained by the arrangement of a course of lectures at the College of Technology, Manchester. The syllabus was as follows :—

"Coal and its Combustion"	Andrew McCulloch, M.Sc. Tech., A.I.C., Lecturer in Fuels in the University of Manchester, and Head of the Fuel Department, College of Technology.
"Smoke and Health"	John S. Taylor, M.D., D.P.H., Assistant Medical Officer of Health, Manchester.
"Smokeless Fuels"	William Gibson, M.Sc. Tech., A.I.C., College of Technology, Manchester.
"The Abatement of Domestic Smoke"	Marion Fitzgerald, A.R.S.I., Joint author of "The Smokeless City." Joint editor of "Home Fires without Smoke."
"The Abatement of Industrial Smoke"	R. M. Rowe, Senior Smoke Inspector, Public Health Department, Manchester.
"General Aspects of the Smoke Problem"	Arnold Marsh, M.Sc. Tech., General Secretary of the National Smoke Abatement Society.

The lectures were primarily intended for those taking part in smoke abatement propaganda, and were illustrated by lantern slides, diagrams, and exhibits. The average attendance was 36, consisting of members of district councils, public health officials, engineers, and others interested in the subject.

Other lectures on smoke abatement have been given on behalf of the Committee in various districts in South-east Lancashire during the year. The lecturers are persons approved by the Committee as suitably qualified for the purpose.

The Committee has continued during the year its enquiries into the use of solid smokeless fuels for the abatement of domestic smoke and has done everything possible to encourage the use of such fuels.

The question as to whether the Regional Committee should be constituted a statutory body for the region has been raised by correspondence forwarded to the Committee by the Ministry of Health. The subject is again receiving consideration.

INDEX.

PAGE

Abergele Sanatorium, Report of Medical Superintendent 114-116
Adulteration of Food and Drugs 199
Air Pollution—See Smoke
Anthrax 51
Antitoxin 35
Area of City and wards in acres. 1, 21
Artificial Sunlight 182

Babies' Hospital 157
Bacteriological Examinations 44, 130
Baguley Sanatorium—Report of Medical Superintendent 101-114
Bakehouses 196
Births 1, 19, 21, 22
,, Act, Notification of 155
,, Illegitimate 22
,, and Birth-rates in Wards 21
Birth-rates 1, 19, 21

Cancer, Progress Report 246-248
Canal Boats Act 200
Cerebro-Spinal Fever 24, 41
Chickenpox 24, 26
Childbirth, deaths at 20, 175
Child Welfare Centres 157, 180-186
Cleansing Department, Work of 231-234
Closets, number of 200, 232
Consumption 71-100
Conveniences, Public 201, 222
Cream and Milk Regulations 199
Creche Ward 126, 160
Crossley Sanatorium 88, 89

Deaths, various causes 12-15
,, in public institutions 1, 3
,, and Death-rates in Wards 21
,, certified by Inquest 23
,, Legitimate and Illegitimate 22
,, Certified by Medical Practitioners 23
,, from various causes for 6 years 3
,, from infectious diseases for 11 years 25

PAGE

Deaths, males 1, 16
,, females 1, 17
,, in infancy 18
,, in childhood 18, 22
,, under 1 year of age per 1,000 births 1, 5, 6, 19, 22
,, uncertified 23
,, and Births, natural rate of increase 21
Death-rates 1, 3, 4, 19-23
,, gains and losses 4
,, male and female 1
,, in the homes of the people and in institutions 1, 3, 19
,, in Wards 21, 22, 23
,, specified causes 4, 6, 19, 20
Delamere Sanatorium 88, 89
Density of population 1, 21
Diarrhœa 50, 51, 156
Diphtheria 24, 31-36, 122
,, attacks, in weeks 31
,, ,, in age groups 32
,, ,, in Wards 33
,, contacts 35
,, Immunisation 35, 122-123
,, "Schick" test 35, 122-123
,, Virulence tests 36
,, bacteriological examinations 44, 130
Disinfected articles 234
Drainage 201, 224
Dysentery 24, 51

Encephalitis Lethargica 24, 41-43
Enteric Fever 24, 37-40, 124
,, attacks and deaths 38
,, bacteriological examinations 44
,, attacks, in weeks. 39
,, contacts 40
Erysipelas 24, 125
Estimated population 1, 19, 21
Excess of births over deaths 1

INDEX—*continued*

PAGE

Fabrics (Misdescription) Act ... 200
Factory and Workshop Act, 1901 :—
  Summary of work by Inspectors ... 204-212
Farms ... 236-239
Fever, Scarlet ... 24, 27, 117
  ,, Enteric ... 24, 37, 124
  ,, Puerperal and Pyrexia 24, 126, 134-148
  ,, Cerebro-Spinal ... 24, 41
Fish, etc., unwholesome ... 228-230
Food Poisoning ... 51
Food, preservatives in ... 199
Food and Drugs and Margarine Acts ... 199, 218

German Measles and Measles, 24, 45-49, 125, 161

Health Visitors ... 155-170
  Infantile mortality ... 5, 6, 19, 22
  Cleansing of verminous children ... 164
  Jewish Health Visitors ... 165
  Notifications of Births Act ... 155
  Yearly Summary ... 166a
  Home Helps ... 188
Homes of the people, death-rates in ... 3
Hospitals, death-rate ... 1, 3, 19
Hostels, municipal ... 201
Houses let in lodgings ... 199
Housing ... 1, 200, 219, 220, 225-227

Ice Cream ... 238-241
Illegitimacy and mortality ... 22
Immunisation—Diphtheria. 35, 149-151
  ,, Community ... 35
Infant life :—
  Work of the Health Visitors, 155-170
Infantile mortality .. 1, 5, 6, 19, 22, 156
Infectious diseases ... 24
  ,, ,, consultations. 25
Influenza ... 153
Inquests ... 19, 23
Inspectors, special summary of work ... 203

PAGE

Institution death-rates ... 1, 3, 19
Investigators, work of ... 187

Jewish Health Visitors ... 165

Malaria ... 24, 51
Markets Department, work of .. 228-230
Marriage rate ... 1, 19
Massage at Centres ... 183
Maternity beds, subsidisation of 187
Maternity and Child Welfare .. 171-194
Maternity Homes and Hospitals 187
Maternal mortality ... 20, 175
Measles and German Measles, 24, 45-49, 161
Meat Regulations ... 195
Meat, etc., unwholesome ... 228-230
Meteorological data ... 2
Middens ... 200, 232
Midwives Act, 1902 and 1918, Report of Executive Officer. 171-194
Milk and Cream Regulations. 199, 242
Milk, Hospitals supply ... 238
Milk and Tuberculosis ... 235-244
Milk (Mothers and Children) Order, 1918, etc. ... 184
Milkshops ... 237
Model Milk Clauses — Work under ... 242
Monsall Fever Hospital :—
  Report of Medical Superintendent ... 117-151
  Aural Report ... 120
  Laboratory Report ... 130
  Return Cases ... 120
  Report of Puerperal Sepsis, 134-148
  Report on "Schick" and "Dick" test ... 149
Mortality, infantile ... 1, 5, 6, 19, 22
  ,, comparison in Wards 21-23

Notifications of infectious diseases ... 24
Notifications of Births Act ... 155
Nursing Homes Registration Act, 1927 ... 187

Offensive trades ... 198
Ophthalmia Neonatorum .. 24, 189-194
Outworkers ... 211

PAGE

Pail-closets................ 200, 232
Paratyphoid Fever..........24, 37-40
Pemphigus Neonatorum.......24, 174
Persons to an acre 1, 21
Persons per house 1
Phthisis 71-100
Pneumonia.............24, 152, 164
Poisons and Pharmacy Act..... 200
Polio-encephalitis 24
Poliomyelitis, Acute Anterior... 24, 41
Poor Law Relief 7-9
Population, estimates of.....1, 19, 21
,, in Wards 21
,, natural increase of.. 1, 21
,, density of......... 1
Pre-Maternity Centres 180-186
Preservatives in Food 199
Public institutions, deaths in.. 1, 3, 19
Puerperal Fever..20, 24, 134-138, 171-173
,, Pyrexia.........24, 171-173

Rag Flock Act (1911)......... 200
Rats and Mice (Destruction) Act 61-70
Recorded death-rates.........1, 19-21
Refuse, disposal of 233
Relief, Poor Law, etc.....7-9, 164, 175

Sanitary Department, work of 197, *et seq.*
Scarlet Fever.............24, 27, 117
,, immunisation 149
,, in quarters 27
,, attacks in Wards.. 28
,, attacks and deaths 29
,, attacks, in weeks.. 30
,, "Return" cases..30, 120
"Schick" test 35, 149
Shops Acts and Orders 198
Smallpox 24, 25
Smoke Abatement (Regional Committee Report).........249-250

PAGE

Smoke..................... 199, 217
Special Inspectors, work of.... 197
Special reports............245, *et seq.*
Statistical summary........... 1-6
Stillbirths 177
Sunlight, artificial............. 182

Tables, Annual 12-23
Tuberculosis of the Lungs..... 71-100
Bacteriological examinations . 44
Notifications 81-89
Cases treated in—
(*a*) Abergele Sanatorium— 96, 97, 114-116
(*b*) Baguley Sanatorium— 96, 97, 101-114
(*c*) Delamere Sanatorium— 88, 89, 96, 97
(*d*) Other Institutions 85, 93
Tuberculosis and milk.....44, 235-244
Tuberculosis and bacteriological work 44, 98-100
Typhoid Fever — see Enteric Fever.................24, 37, 124
Typhus Fever 24

Uncertified deaths 23
Unhealthy dwellings.........200, 220
Unwholesome foods 228-230

Vaccination and Smallpox..... 25, 26
Venereal diseases 52-60
Verminous cleansing 164
Veterinary and milk control...235-244
Virulence test 36

Water closets 200
Whooping Cough 47-49, 162
Work of Sanitary Department— 197, *et seq.*
Work of Cleansing Department, 231-234
Work of Special Inspectors.... 197
Workshops 198